South African Medical Journal

Organ of the Medical Association of South Africa

S.-A. Tydskrif vir Geneeskunde

Vakblad van die Mediese Vereniging van Suid-Afrika

Incorporating the *South African Medical Record* and the *Medical Journal of South Africa*

REGISTERED AT THE GENERAL POST OFFICE AS A NEWSPAPER

Vol. 25, No. 32 | Cape Town, 11 August 1951. | Weekly 2s

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South African Medical Journal

Suid-Afrikaanse Tydskrif vir Geneeskunde

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BUCCAL LICHEN PLANUS AND CARCINOMA

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Lesions of lichen planus commonly occur upon the mucous membranes. The mucosae of the mouth and of the genitals are most frequently affected, buccal lesions being present in about 50% of all cases; and there are reports of cases where the anus, urethra, bladder and even the stomach have been affected.

The development of carcinoma on the mucosal lesions of lichen planus has rarely been reported, and the standard textbooks usually make no mention of the possibility. Darier,[1] however, states categorically that 'the treatment of mucosal lichen planus need not be very energetic; the condition is stubborn but without any gravity. It never leads to cancer.' Pautrier[2] says: 'Lichen planus of the mucosae does not ever appear to degenerate and give rise to a malignant tumour.' The few reported cases of carcinoma developing on lingual lichen planus are presumed by Pautrier to be due probably to irritation from teeth or to occult syphilis.

In presenting a case where carcinoma developed on lingual lichen planus it seems pertinent to review the appearances produced by lichen planus on the buccal mucous membranes.

The buccal mucosa is one of the sites of election for lichen planus; the cheeks and tongue are most commonly affected; the palate, tonsils, lips and gums rarely. Buccal lesions may appear before a skin eruption, accompany it or, less frequently, be the only manifestation of the disease.

Upon the *cheeks* (Fig. 1) the disease develops first on the interdental line at the level of the last molars and then may extend forward, upwards and downwards until the whole cheek is covered. The earliest lesions are little white points which coalesce to form streaks that make a network of complete or incomplete circles. The pattern so formed can sometimes be likened to a fern leaf. The component streaks may be elevated, level with the surface or depressed below it.

Fig. 1. Lichen planus of cheek. *Fig. 2.* Lingual lichen planus. Discrete type. *Fig. 3.* Lingual lichen planus. Diffuse type.

The *tongue* is affected upon its dorsal surface or sides, rarely on the under surface. The lesions are at first discrete, round or oval, slightly elevated white plaques, 0.5-2 cm. diameter, with well-defined edges and a velvety

surface (Fig. 2). Coalescence of such patches may produce larger irregular band-like lesions that can cover large areas or the whole surface of the tongue (Fig. 3). At first the epidermis is thickened and the papillae obscured or even atrophied. In time the surface becomes flattened, atrophic and greyish-red in colour. At this stage leukoplakia may be simulated; but the lesions of leukoplakia are more shiny and nacreous; those of lichen planus lustreless and sclerotic. Further, if the tongue is stretched, it is usually possible in lichen planus to identify a network or circinate pattern similar to that seen on the cheeks. This tendency to ring formation is very important in differential diagnosis as it occurs in all buccal lesions.

Buccal lesions of lichen planus are symptomless and ulcerate only exceptionally—points which help to distinguish them from the erosive lesions of secondary syphilis, erythema multiforme, pemphigus, etc. Lichenoid skin and mucosal lesions may result from the therapeutic use of gold salts (H. Gougerot) and may very closely resemble true lichen planus; but the mucosal lesions usually become eroded and there is a history of the use of gold.

The histological picture is the same as that seen in skin lesions with hyperkeratosis, patchy granulosis, acanthosis and a well-defined round-cell infiltration of the papillary layer of the dermis. This picture is characteristic and biopsy should not be delayed in doubtful cases.

Malignant change has been reported as occurring on lesions of the tongue and cheek. The change generally occurs in cases of long standing; and one such patient had suffered from lichen planus for 40 years. The role of coincidental factors such as irritation from teeth or smoking, and syphilis is frequently stressed in reports. Carteaud and Stiegler [3] describe a case in which epithelioma developed on lichen planus of the cheek at the point where the smoke from the patient's pipe habitually impinged. On the other hand Périn, Ducourtioux and Kritter [4] report a case of epithelioma on lingual lichen planus where no irritative factor could be demonstrated. (These authors give a list of 13 references in the literature.)

The danger signs suggesting malignant change are induration, ulceration or tumour formation. Verrucose lesions of the cheek are also suspect and Watrin [5] has seen malignant change in such a case.

The case now to be described is typical of those already reported in the literature.

CASE REPORT

A European male born in Southern Rhodesia, age 27, was referred to me in November 1950 with an ulceration of the tongue. He stated that he had had, for the past 10 years or more, a number of white patches constantly present on the dorsum and sides of his tongue. These had caused no symptoms and he did not recall ever having had any other lesions elsewhere on his skin or mucous membranes. While serving in the Army he had, about 1944, consulted a medical officer who treated the lesions with local applications of trichloracetic acid, but this proved ineffective. He was found, in 1949, while in England, to be suffering from pulmonary tuberculosis, but this responded well to appropriate treatment.

In January 1950 he consulted a dermatologist, Dr. T. E. Anderson (Aberdeen, Scotland) who made a diagnosis of hypertrophic lichen planus. The histological report then was: 'This lesion is a papillary hyperplasia showing a patchy round cell infiltration, hypertrophy of the granular layer and a notable hyperkeratosis. No evidence of malignancy.' He was given a course of 10 weekly injections of Bisglucol 0.5 c.c., and local applications of 2.5% chromic acid, later changed to 1% silver nitrate. In May 1950 it was noted that the lesions on the dorsum of the tongue were improved, but there were denuded areas on the sides. He returned to Rhodesia and in October 1950 reported to his doctor with a bleeding ulcer on his tongue.

Examination showed a deep conical ulcer, about 2.5 cm. in diameter, occupying the central area of the left side of the tongue. The edges were irregular and friable and there was arterial bleeding from the depths. Elsewhere on the dorsum could be seen round or oval plaques, about 1 cm. diameter, slightly elevated and having a greyish-white velvety surface.

Fig. 4. Carcinoma on lingual lichen planus.

These plaques were typical of lichen planus, but no other evidence of the disease could be found elsewhere on the skin or mucous membranes. There was no clinical evidence of syphilis, acquired or congenital, and the patient stated that 'blood tests' done in the past had always been negative. He was a moderate smoker.

Histological examination of tissue from the edge of the ulcer showed a squamous-celled carcinoma. Surgical removal was not possible, and the patient was referred for radiotherapy. Fig. 4 shows the condition of the tongue after the biopsy operation and before radiotherapy was begun at the Meyerstein Institute of Radiotherapy, Middlesex Hospital, London.

SUMMARY

The appearances of lichen planus of the buccal mucous membrane are described, and details are given of a case where malignant changes occurred upon lingual lichen planus.

The mounting number of reports of malignant change

occurring on a basis of buccal lichen planus suggests that earlier optimistic statements about the prognosis of this condition may have to be revised.

I have to acknowledge my indebtedness to Mr. J. Douglas, Dr. M. Weinbren and Dr. J. Murray of Johannesburg for assistance with this case. Figs. 1, 2 and 3 were lent by Dr. A. Touraine from his collection at the Saint-Louis Hospital, Paris. Fig. 4 was lent by Professor B. W. Windeyer, London, who is now treating the patient.

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MYASTHENIA GRAVIS IN THE BANTU

REPORT OF A CASE

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A careful search through the current South African literature fails to reveal a single report of a case of myasthenia gravis in the Bantu. No mention is made of this disease in *The Sick African*[1] or in *The Biology of the Negro*.[2] The Baragwanath non-European Hospital has now been in existence for over three years. During this period, this is the first case in which the diagnosis has been made. A number of Johannesburg physicians who have had extensive experience in non-European work, on being questioned could not recall a case of myasthenia gravis in the Bantu. Several cases have been seen in the Coloured population of Cape Town[3] and Harvey,[4] in a report on 175 cases of myasthenia gravis, mentions that 20 (i.e. 16%) of these were Negroes.

It is felt that this incapacitating disease would ultimately force a Bantu to admit himself into a hospital and for that reason it is concluded that myasthenia gravis must be a very rare disease in the Bantu.

Adam M., a Msutu aged 44, a somewhat obese, tall but powerfully built Bantu, was admitted on 28 March 1951. Until four weeks before admission he felt perfectly strong and able to do his work as a domestic servant. He then suddenly noticed that his vision became affected—this difficulty was later discovered to be due to a paralysis of the external muscles of the eyes. There had not been any diplopia. This complaint remained constant and in addition, he began to notice a little weakness in the legs. Two days before admission his whole body became weak and he found that he was unable to walk more than about 20 yards; this weakness was somewhat relieved by rest. He also noticed that his arms were affected—lifting heavy objects which he could previously do with ease now had become a tremendous task. On direct questioning, he had noted that for the past two days he had great difficulty in completing a heavy meal. In the gastro-intestinal history, however, he had volunteered that for two days he had only been eating soft foods. He now felt so weak that he could not walk or even rise from the bed.

There was no history of a similar condition in the family. An old injury to the left upper eyelid resulted in an ectropion.

He was a well-nourished big Bantu, 198 lb. in weight and lying comfortably in bed. The right eye showed an obvious ptosis, the left eye, an ectropion. Blood pressure, 140/90 mm. Hg. There was no dullness in the second interspace over the sternum. The rest of the physical examination was entirely negative except that he had the utmost difficulty in rising from the supine position. In fact, without help, this was not possible. To flex the outstretched legs at the hip was also a difficult matter. The pupils were equal, circular and reacted briskly to light and accommodation. Discs: N.A.D.

Marked paralysis of the external recti muscles was present. All the external muscles of the eye were involved but not to the same extent as the external recti. Repeated tests for diplopia were done but this was not present. The probable explanation was that the eye muscles were symmetrically affected.

The power of all the muscles of the body was weak for a man of his stature. However, this was especially noticed in attempts to extend the right forearm, and also in the right sternomastoid.

All the reflexes were present and equal.

There were no sensory disturbances.

Investigations:—Urine: Normal; Blood Wassermann test: negative;

Cerebrospinal fluid: pressure normal; no cells; total protein: 27 mg. per 100 c.c.; sugar, 73 mg. per 100 c.c.; chlorides, 739 mg. per 100 c.c.; Wassermann test: negative.

Blood potassium, 20.1 mg. per 100 c.c.

E.C.G.: normal.

X-ray of the chest: Heart and lungs normal. No abnormal shadow in the superior mediastinum.

The patient was given Prostigmine 2 mg. subcutaneously with Atropine 1/100 gr. The response to this was most dramatic. Power returned and the ophthalmoplegia improved considerably. He did, however, sweat excessively and had two bowel actions.

To rule out a possible psychological factor, subcutaneous saline was injected the next day. This had no effect. The same afternoon, at a medical ward round, Prostigmine again had the desired effect.

He was then given Ephedrine gr. ½ *b.d.* and Prostigmine 15 mg. *t.d.s.* by mouth. On this regime the patient

was able to walk about. He felt much stronger and was able to finish his meal. However, he was unable to move his eyes about adequately.

On 3 April 1951 there was still ptosis; no movement of the eyes outwards was possible, but the other movements of the eyes were an improvement on the state at the initial examination.

There was still some muscle weakness. He had some difficulty in rising from the supine position.

On 7 April 1951 he was given an additional dose of Prostigmine, the first dose 15 mg. at 6 a.m. and then four-hourly until 6 p.m.

There was no further improvement, so on 11 April 1951 the Prostigmine dose was doubled. The patient began to feel much stronger, but the eye movements were still not full. His only complaint was extreme weakness on awakening in the morning. This, he stated on further questioning, had been present since admission despite the therapy. One would expect that the strength of a patient with this disease would be greatest after a night's rest. However, Viets [5] reports a case with this difficulty, necessitating a dose of Prostigmine in the early hours of the morning.

On 17 April 1951 therapy was postponed in order to demonstrate the case at another meeting. In attempting to walk uphill to the transport, he was compelled to stop after 50 yards on account of weakness. He was given Prostigmine 30 mg. by mouth. Nevertheless at the meeting two hours later he was unable to keep the outstretched hands raised for longer than one minute. Again Prostigmine by injection produced a dramatic result.

There was, therefore, no remission of the disease. Viets [6] states that spontaneous remissions in myasthenia gravis may occur no matter how severe the initial symptoms are.

This case has responded reasonably well to the proved forms of therapy. At present another 30 mg. of Prostigmine is administered at 2 a.m. He still is unable to move his eyes externally, to the fullest extent, although the other eye movements have improved considerably.

It has been decided to watch him as an out-patient before considering other means of therapy such as T.E.P.P. (Tetra-ethylpyrophosphate), D.F.P. (Di-isopropyl-fluorosphosphate) or possibly thymectomy.

I wish to thank Dr. Allen, Superintendent, Baragwanath Hospital, for his permission to report this case.

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NEW PREPARATIONS AND APPLIANCES

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Extensive clinical investigations since 1946 by Anrep *et al.*[3]; Rosenman *et al.*[10]; Best and Coe[11]; and Ayad[12] among others, have established these claims for the undoubted value of khellin in angina pectoris.

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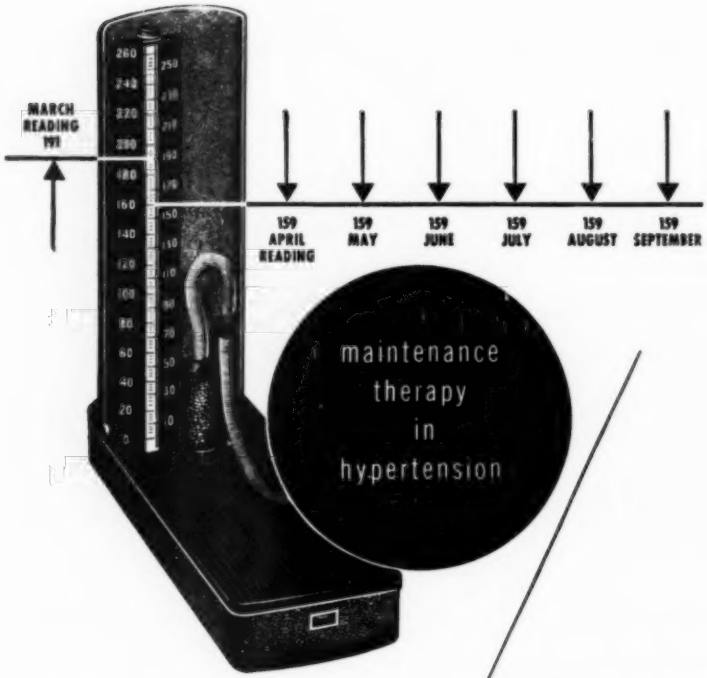

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*Gruber, C. M., Ellis, F. W. and Freedman, G.: J. Pharmacol. and Exper. Therap. 81:254 (July) 1944.

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VAN DIE REDAKSIE

MENSLIKE ONDERVOEDING: 'N SUID-AFRIKAANSE BYDRAE*

Die geskiedenis van georganiseerde Suid-Afrikaanse navorsing oor die vraagstukke van kliniese geneeskunde is eintlik ook die geskiedenis van ons Mediese Skole. Al is hierdie tydsverloop maar betreklik kort, tog was dit nie sonder sy fases van onderskeiding nie; en dit is 'n aansienlike huldeblyk teenoor die oorlewering van navorsing in hierdie land dat daar 'n baie merkwaardige en omvattende bydrae verskyn het tot die proefondervindelike geneeskunde. Dit is die belangwekkende werk deur prof. Joseph Gillman, Hoof van die Fisiologiese Departement, Universiteit van Witwatersrand, en is geskryf in medewerking met sy broer, dr. T. Gillman.

Die bestek van hierdie werk is veelsydig; die ontleding daarin van die ingewikkelde voedingskwaal-probleme, is kragtig en dit aarsel nie om die grondslae te beoordeel wat alreeds as uitgemaak aanvaar is nie, veral by die bestudering van so 'n voedingskwaal soos pellagra.

Die belangrikheid van die opskrif van hierdie boek mag nie die aandag van die leser ontglip nie. Ons het gewoond geraak daaraan om 'n voedingskwaal te beskou as iets wat reggemaak kan word deur vervanging van een of meer ontbrekende faktore uit die voedselsamestelling. Hierdie Yaleslotteorie oor gebrekstoestande het tot die byna naïewe opvatting gelei asof dit net 'n saak van die opsporing van die regte (dog ontbrekende) sleutel sou wees wat op die besondere slot pas om normaliteit te herstel.

Die hoofstelling van die skrywers betwis hierdie oorvereenvoudigde benadering van die vraagstuk. Volgens hulle beskouing, is dit 'n slepende ondervoeding wat elke afsonderlike ontwikkelingsgang verstoor op die lewensbaan van die slagoffer van die stoornis; terwyl hierdie ondervoedingsproses ook onderbreek kan word deur verskerpte voorvalle van erger of ligter graad. Hierdie beskouing is nie onbelangrik vir die grondslae vir behandeling nie. Die behandelingspoging sal nie slaag nie tensy dit aanstuur op beide kante van die stoornis.

Die skrywers het ook die groot verskeidenheid en veelvuldigheid beklemtoon van die faktore, wat werksaam is op alle stadia langs die lewensweg en wat die kliniese en stofwisselingsvorm vasstel en bydra tot die uiteindelike prent en vooruitsig. Hul gee inderdaad die indruk dat die openbaringe van voedingskwale só veranderlik kan wees, dat geykte voorbeelde van simptome en tekens dalk

* *Perspectives in Malnutrition: A Contribution to the Biology of Disease from a Clinical and Pathological Study of Chronic Malnutrition and Pellagra in the African.* Deur J. Gillman, D.Sc., M.B., B.Ch., en T. Gillman, M.Sc., M.B., B.Ch. (Pp. 584 met 265 illustrasies en 45 tafels. $18.00.) New York: Grune en Stratton. 1951.

EDITORIAL

HUMAN MALNUTRITION: A SOUTH AFRICAN CONTRIBUTION*

The history of organized South African research into the problems of clinical medicine is, in effect, the history of our Medical Schools. Although this period is a relatively brief one, it has not been without its phases of distinction; and it is a considerable tribute to the tradition of experimental inquiry in this country that a very remarkable and comprehensive contribution to experimental medicine has now made its appearance. This is the interesting publication of Prof. Joseph Gillman, Head of the Department of Physiology, University of the Witwatersrand, written in collaboration with his brother, Dr. T. Gillman.

The scope of the work is encyclopaedic, its analysis of the complex problems of nutritional disorders is vigorous and it does not hesitate to criticize many principles which have come to be taken for granted, particularly in the study of such nutritional disorders as pellagra.

The significance of the book's title should not be lost upon the reader. We have grown accustomed to think of a deficiency state as something which can be remedied by the replacement of one or more specific factors missing from the diet. This Yale-lock theory of deficiency states has led to the somewhat naïve conception that it is only a matter of finding the correct (but missing) key to fit an exclusively reserved lock in order to restore normality.

The main thesis of the authors contests this oversimplified approach to the problem. In their view the basic picture is one of chronic malnutrition which perverts the individual course of development along the life-track of the victim of the disorder; and this course of malnutrition can be punctuated by acute episodes of greater or less severity. This view is not without its importance for the principles of treatment. Success will not attend the therapeutic effort unless it is directed to both aspects of the disturbance.

The authors have also stressed the great variability and multiplicity of the factors operating at all stages along the life-track which determine the particular clinical and metabolic pattern contributing to the final picture and the prognosis. Indeed, they create the impression that the manifestations of nutritional disorders may be so protean,

* *Perspectives in Human Malnutrition. A Contribution to the Biology or Disease from a Clinical and Pathological Study of Chronic Malnutrition and Pellagra in the African.* By J. Gillman, D.Sc., M.B., B.Ch., and T. Gillman, M.Sc., M.B., B.Ch. (Pp. 584. With 265 illustrations and 45 tables. $18.00.) New York: Grune & Stratton. 1951.

nie mag voorkom, om die uitkenning te vergemaklik van simptomegroepe en entiteite nie; nogtans bly die feit dat, hoe meningvuldig die bepalende onbestendighede ook mag wees, daar tog uiteindelik 'n sekere konstantheid van die kliniese prent sigself na vore dring sodat baie gevalle van maagkoors, pellagra, ens., wat hul wese betref, sonder enige moeilikheid kan herken word. Nogtans sal die beklemtoning van hierdie benadering, wat die skrywers daaraan gee, die nodige en heilsame dissipliene t.o.v. ons kliniese denkwyse gee.

In sekere sin, is die boekdeel ook 'n belangrike bydrae tot die filosofiese uitkyk op die geneeskunde: dit is algemeen in sy toepaslikheid, al spruit dit voort uit 'n besondere bestudering van voedingskwale.

Die oorspronklike werk (vlytig, lywig en nougeset) gerapporteer deur die skrywers oor, b.v. die histopatologie van die vel by pellagra en by ondervoeding en die beskrywing van die veranderinge in die struktuur en werking van die lewer, is beslissend en meesterlik.

Daar kan geen twyfel wees nie, dat die boek uitdagend is en baie betwisbare stof bevat. Ons is oortuig dat vakmanne, wat hulself gewy het aan diepgaande studie van sekere beperkte gedeeltes van die veld oor menslike ondervoeding, rede sal vind om oor iets bepaalds, 'n meningsverskil daarop na te hou. Die omvang van die prestasie van die broers Gillman, egter, is so groot dat dit fittery sou wees om op kleinighede te wys waar die bydrae in die geheel so aansienlik is.

Hierdie boek kan daar met reg aanspraak op maak dat dit is soos wat die outeurs dit genoem het in die ondertietel, nl. 'n bydrae tot die biologie van siekteverskynsels. Dit sal luister bring op die naam van die Universiteit wat die geleenthede daargestel en hierdie arbeid moontlik gemaak het. Dit sal eerbiedige aandag afdwing vir die stem van Suid-Afrika, wanneer die vraagstuk van menslike ondervoeding bespreek word op internasionale verhoë.

Die outeurs moet gefelisiteer word met hul vindingryke benadering, hul ywerige uitbuiting van en gegronde geleerdheid, wat uitkom in hierdie groot arbeid.

Dis nie onvanpas om 'n aanmerking te maak op die grootse wyse waarop die uitgewers die boek vervaardig het nie. Die letterdruk doen aangenaam aan, die prente is baie sorgvuldig gemaak en die boekdeel is 'n pragtige voorbeeld van uitmuntende boekemakery.

that constant patterns of symptoms and signs may not occur to facilitate recognition of syndromes or entities; yet the fact remains that, however numerous the significant determining variables may be, in the end a certain constancy in the clinical picture does assert itself and many cases of typhoid fever, pellagra, etc., will be recognized for what they are without any difficulty. Nevertheless, the emphasis which the authors have given to this approach will create a necessary and salutary discipline in our clinical thinking.

In a sense the volume is also an important contribution to a philosophical outlook on medicine, general in its application although it emerges from a particular study of nutritional disorders.

The original work (industrious, massive and meticulous) reported by the authors on, e.g. the histopathology of the skin in pellagra and in malnutrition and the account of the structural and functional changes in the liver, is definitive and masterly.

There can be no doubt that the book is provocative and contains much material that is contentious. We are quite certain that the experts who have devoted themselves to the intensive study of restricted portions of the field of human malnutrition, will find occasion to differ on some specific issue. The magnitude of the achievement of the brothers Gillman, however, is so considerable that it would be carping criticism to niggle about minutiae when the over-all contribution is so considerable.

This book can justly claim to be what the authors described it as in its sub-title, viz. a contribution to the biology of disease. It will add lustre to the name of the University which provided the opportunities which made this work possible. It will ensure respectful attention to the voice of South Africa when the problems of human malnutrition are discussed on international platforms.

The authors are to be congratulated on their resourceful approach, their industrious exploitation and the vast erudition which this great labour has revealed.

It is not inappropriate to comment on the magnificent way in which the publishers have produced this book. The type-face is pleasing, the illustrations have been reproduced with great faithfulness and the volume is a beautiful example of superb book-making.

SUDDEN DEATH DUE TO AIR EMBOLISM

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Recently the author performed autopsies on two cases of death due to air embolism after criminal abortion. Post-mortem examination disclosed that these deaths were due to massive pulmonary air embolism. The right side of the heart, in both cases, was markedly distended with air which blocked further entrance of venous blood, prevented proper ventricular contraction and caused death.

As air embolism occurs more frequently than is suspected and fatalities are occasionally encountered, these two cases will be described and the pathological findings of air embolism in general will be reviewed.

Case 1. A European female aged 34 years was found dead in her bedroom. She was three months' pregnant and had threatened 'to do away with it'. In the room

was a basin of soapy water, potassium permanganate crystals and a glycerine syringe. There was a large amount of blood all over the bed and the floor and in a chamber was a foetus with placenta and numerous blood clots.

An autopsy was performed 14 hours after death. There was marked post-mortem lividity over the back of the body, the face, lips and finger nails. A large amount of froth exuded from the mouth and nose.

Because of the possibility of air embolism, the sternum was removed only partially. The sterno-clavicular joints and the first and second ribs were not disarticulated.

Opening of the pericardium revealed that the whole of the right side of the heart was ballooned out. The inferior vena cava appeared distended with air bubbles and frothy blood. On filling the chest cavity and the pericardium with water, and opening the right ventricle under water, large bubbles of air escaped with a small amount of frothy blood. The endocardium and the valves of the right side of the heart were normal. No air was apparently present in the left side of the heart or in the coronary arteries. The endocardium, the valves of the left side and the aorta, coronary arteries and myocardium were normal. The pulmonary arteries contained frothy blood.

Both lungs were crepitant and there was a large amount of terminal frothy oedema. There were a few petechial haemorrhages on the visceral pleura.

The inferior vena cava and the pelvic veins contained numerous air bubbles and frothy blood.

The uterus was enlarged to the size of a three months' pregnancy. It was soft in consistency and contained blood clots and fragments of placenta. There were large areas of haemorrhage. Both Fallopian tubes were slightly distended and the right ovary contained a large corpus luteum. The vagina was full of blood clots.

The brain appeared normal and the rest of the organs showed some degree of visceral congestion.

Case 2. A Coloured woman aged 25 years was stated to have been four months' pregnant. She and a friend visited the house of a Coloured abortionist on three separate occasions. Each time the deceased told her friend that the woman had injected a warm soapy solution into her womb. Two hours after the last visit the deceased aborted, having passed a foetus and pieces of placenta. A few minutes afterwards she complained of feeling dizzy and breathless and then fainted. A doctor who was called immediately stated that she was dead.

An autopsy was performed 20 hours after death. The deceased was a thin Coloured woman, 5 ft. 5 in. in height and weighed 124 lb. Her lips and finger nails were a deep blue colour. A large amount of blood was present in the vagina.

As air embolism was suspected, the sternum was removed as in Case 1 so as to avoid cutting the mediastinal vessels. On opening the pericardium, the right side of the heart was found greatly distended and ballooned out. The inferior vena cava was distended and contained air bubbles.

The pericardial and chest cavities were filled with water and the right ventricle was opened. Large bubbles of air escaped with a small amount of frothy fluid blood. The endocardium and the valves of the right side of the heart were normal. The foramen ovale was closed. The left side of the heart was normal and the coronary arteries contained no air bubbles. There were no petechial haemorrhages in the pericardium or the pleura. The lungs showed a considerable amount of terminal oedema. The pulmonary artery contained frothy blood.

The inferior vena cava in its abdominal portion contained air bubbles and frothy blood. Both ovarian veins were distended with frothy blood and air could be seen in the other pelvic veins.

The uterus was enlarged to the size of a four months' pregnancy and contained much blood clot and placental remnants. There was a large amount of blood clot around the maternal blood sinuses. The left ovary showed a large corpus luteum.

The brain showed signs of congestion but no haemorrhages were present. All the other organs showed signs of congestion.

DISCUSSION

Two fatal cases of air embolism of the pulmonary variety are described, the first where death occurred suddenly and the second where it was somewhat delayed. This delay in the second stage is explained by the fact that air had accumulated between the placenta and the uterine wall where the placenta was only partially separated. Further separation of the placenta and the opening of the maternal blood sinuses allowed the entry of the air into the maternal blood sinuses and then into the pelvic veins.

Air embolism is the result of the entrance of air into the venous circulation with consequent blockage of the right side of the heart and the pulmonary circulation. If the air enters the cerebral or coronary circulation it will cause a similar blockage. Blockage of vessels by air in other locations does not end in disaster and is of no consequence.

Thus, for air embolism to produce death, air must enter the circulation in large quantities in a short period of time. Large quantities of air over a long period may not terminate fatally. The quantity of air necessary to cause death varies considerably. Therapeutically, up to 1,000 c.c. of oxygen per hour has been given intravenously without fatal results (Zeigler, 1941) but, of course, it must be remembered that oxygen is more readily absorbed than air which contains only 21% oxygen.

Small quantities of air may cause death if the air is trapped in the coronary arteries or in the cerebral vessels.

There are two varieties of air embolism: the pulmonary type (which is more frequent) and the systemic type.

Pulmonary Air Embolism. In fatal pulmonary air embolism, a relatively large volume of air reaches the right side of the heart in a short period of time. Here the churning action of the heart on the blood and air form 'blood foam' which contains large bubbles of air. This is more compressible than normal blood and less readily expelled, a considerable amount of air remaining after each systole. Some of the air remains in the heart and some passes into the pulmonary artery. The pulmonary circulation becomes obstructed, the amount of obstruction in the pulmonary bed depending upon the quantity of air passed through the heart. The air bubbles remaining in the heart cause a right-sided failure, as apparently the

'blood foam' is sufficiently compressible during systole and expansile during diastole to prevent adequate emptying of the heart. The right auricle and the right ventricle distend and the peripheral venous pressure is increased. Thus sudden death may occur during obstruction to the outflow from the right ventricle (due to interference with proper ventricular contraction), or to occlusion of the pulmonary arterial tree or to a combination of the two.

This theory of the mechanism of death in air embolism is confirmed by Forbes (1944), who states that in pulmonary air embolism 'death may arise from a mechanical interference with the heart function, from a blockage of the pulmonary artery by froth with an arrest of the circulation in the lungs, or from an obstruction of the finer arterioles in the lungs by multiple emboli'.

The history of the case and the conditions under which death occurs will lead to the suspicion of air embolism. In the pulmonary type of air embolism the right side of the heart will be found distended. The venae cavae will be distended with frothy blood and when the heart, pulmonary vessels and venae cavae are opened under water, large bubbles of air and frothy blood escape.

Systemic Air Embolism. In systemic air embolism air enters the left side of the heart from the pulmonary veins or through a septal defect such as a patent foramen ovale. Air may also enter the left side of the heart from injury to a pulmonary vein without first entering the venous circulation, e.g. in artificial pneumothorax or in stab or gun-shot wounds of the chest. In most cases, however, the air originally enters the venous circulation without causing death. Small amounts of air in the form of fine bubbles pass through the lungs into the left side of the heart.

The mechanism of death in systemic air embolism is different from that in pulmonary air embolism. In this form of death, Gordon (1945) states 'that air emboli have been demonstrated in the terminal segments of the cerebral arteries' and according to Chase (1934) 'death in these cases may be attributed to the sudden loss of function of vital centres consequent upon a widespread vasoparalysis with stasis'.

If the air bubbles reach the brain, cerebral air embolism results and at autopsy there are multiple petechial haemorrhages throughout the white matter.

Gordon (1945) states that the demonstration of air bubbles in the veins of the neck and the head has not been recorded as a prominent finding in cases of air embolism from attempted criminal abortion. He states that air may reach the jugular vein and the cerebral veins by a retrograde spread through the right auricle and the superior vena cava, as frothing of the blood was not observed in the left side of the heart and the common carotid artery, in his case. Gordon also quotes the experimental work of Curtillet and Curtillet (1939) who suggest that the passage of air emboli through the capillaries is a rare phenomenon and that the air bubbles are completely absorbed without progressing into the capillaries and only an occasional air bubble succeeds in passing to the venous end of a capillary. Their conclusion is that the air reaches the systemic circulation from the pulmonary circulation by means of arterio-venous anastomoses in the lungs.

Should the coronary arteries be blocked by air, then sudden death results. The air may reach the coronary vessels by the same mechanism as it reaches the veins of the neck or the cerebral vessels.

CONDITIONS IN WHICH AIR EMBOLISM MAY OCCUR

1. *The Head.* Wounds or operations in which the dural sinuses are injured.

2. *Nasal sinuses.* During lavage.

3. *Neck and Chest.* Wounds in the region of the carotid vessels or jugular veins or their branches. Wounds of the pulmonary vessels.

4. *Peripheral Veins.* In intravenous injections. If small amounts of air are injected, symptoms are rarely produced.

5. *Urinary Bladder.* Air embolism has occurred during cystoscopies.

6. *Uterus.* This is commonest in criminal abortions, when the placenta is partially separated, allowing large quantities of air to get into the maternal sinuses and the uterine veins.

Diagnostic curretage and therapeutic uterine injections have been complicated by air embolism. It also has occurred in testing the patency of the Fallopian tubes (Rubin's test).

Cases have been reported of fatal air embolism during intravaginal insufflations.

7. *Artificial Pneumothorax.* This may be complicated by air embolism. Some authors believe that death is due to a pleural cardio-inhibitory reflex and not to air entering a pulmonary vein and causing cerebral or coronary air embolism.

Kelly, Gibson and Meakins (1947) describe a case of cerebral air embolism following artificial pneumothorax. Their conclusion was backed by electro-encephalographic evidence. They state that the reaction and fatalities following artificial pneumothorax result from interference with one of three major organs, the heart, the lungs and the brain. They state that there may be symptoms due to plugging of the pulmonary arteries with air emboli and that blocking of the coronary or the cerebral arteries by the air emboli may lead to serious accidents.

The same authors state 'there seems to be two distinct types of reaction.

(a) A reflex arrest of circulatory function arising from the needling of the pleura with resulting symptoms such as dizziness, syncope and cardiac arrest—a complex which is very similar to the vasovagal reflex effects of a hypersensitive carotid sinus.

(b) A reaction characterized by convulsions, blindness, anaesthesia, coma—in other words an episode due to diffuse interference in the functions of the central nervous system such as multiple air emboli might produce.'

They conclude that this reaction is attributed to air embolism because:

i. The cause and effect relationship is so striking;

ii. The symptom-complex resembles that which has been produced in animals by intravascular injection of air.

SUMMARY

1. Two fatal cases of air embolism of the pulmonary variety due to criminal abortion are reported.

2. The common type of fatal air embolism is the pulmonary type. Here large quantities of air reach the right side of the heart in a short period of time, and interfere with proper ventricular systole and result in sudden asphyxial death.

3. Systemic air embolism is less common. Here death may occur from cerebral or coronary air embolism.

4. The various conditions in which air embolism may occur have been described.

The introduction of air under pressure into the uterine cavity is the commonest cause of air embolism.

I would like to acknowledge thanks to Dr. H. S. Gear, Deputy Chief Health Officer, Union Health Department, and Prof. R. Turner of the Department of Medical Jurisprudence, University of Cape Town, for their permission to publish this paper; I am also indebted to Dr. H. A. Shapiro for his helpful and critical advice.

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SOME DISCREPANCIES IN DISEASE INCIDENCE BETWEEN THE EUROPEAN AND THE SOUTH AFRICAN NEGRO (BANTU)

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NEOPLASTIC CONDITIONS

In this group the difference in the average age of the hospital populations between European and Bantu must obviously affect the incidence of malignant conditions, since these are commoner in the older age groups.

As previously stated Bantu male patients averaged 7.4 years younger than European males, while for Bantu women the figure was 11.6 years younger.

This difference in the average ages of the two groups cannot be an important factor in the benign neoplasms which occur mainly in younger people.

The figures in this section have all been taken from the Pathological Department of the South African Institute for Medical Research, except in the case of uterine fibromyomata where the figures were obtained from hospital operation theatre records.

Uterine Fibromyomata. Gynaecologists working amongst the Bantu have the impression that fibromyomata causing symptoms are considerably more common amongst these people than amongst Europeans. This impression is borne out by Table 10.

TABLE 10

	Europeans	*Non-Europeans*	
	General Hospital Fibroids	*Baragwanath Hospital Fibroids*	*Coronation Hospital Fibroids*
1948	67	42*	39
1949	57	108	42
1950	62	113	50
Totals	186	397	

*These 42 cases were accidentally omitted from the calculations. Their inclusion would have increased the difference in incidence slightly.

Average age Non-Europeans: 35·1
Average age Europeans: 40·5

Below age of 30 { Non-Europeans: 16·9%
Europeans: nil

Incidence per 100,000 population { European: 62·0
Non-European: 88·7

Incidence per 1,000 admissions { Europeans: 4·23
Non-Europeans: 5·84

On a population basis difference = 27·0 ± 6·5 = 4·2 x standard error. On an admission basis difference = 0·16 ± 0·44 = 3·6 x standard error.

One may therefore draw the conclusion that fibromyomata are definitely commoner in the Bantu and occur in a younger age group.

Laryngeal Growths. Table 11 shows that both benign papillomata and carcinomata occurred almost as frequently in the non-European as in the European. The average ages were however lower in the former, i.e.:

Europeans: benign 42; malignant 51; Non-Europeans: benign 33; malignant 39;

TABLE 11

	General Hospital		*Baragwanath Coronation Hospital*	
	Benign	*Malignant*	*Benign*	*Malignant*
1950 (up to August)	2	0	3	0
1949	8	1	6	2
1948	4	3	4	2
Totals	14	4	13	4

These figures do not support Gelfand's view that carcinoma of the larynx is rare in the Bantu, nor Strachan's findings in his 3,851 autopsies, in which he found nine carcinomata of the larynx in Europeans but none in Africans.

Growths of the Breast. The benign conditions included all masses for which biopsy examination was considered necessary and consisted mainly of 'chronic interstitial mastitis' and benign neoplasms.

TABLE 12

	General Hospital		*Baragwanath Coronation Hospital*	
	Benign	*Malignant*	*Benign*	*Malignant*
1950 (up to August)	28	19	6	4
1949	34	47	8	11
1948	23	33	6	9
Totals	95	99	20	24

Incidence per 1,000 admissions:—

Malignant { Europeans 2·24 / Non-Europeans 0·34

Benign { Europeans 2·6 / Non-Europeans 0·28

Incidence per 100,000 population:—

Malignant { Europeans 33·0 / Non-Europeans 6·0

Benign { Europeans 31·7 / Non-Europeans 5·0

Average age of European: benign 25·1; malignant 50·4
Average age of Bantu: benign 21·6; malignant 53·4

In malignant cases on a population basis the difference = $27 \cdot 0 \pm 3 \cdot 6 = 7 \cdot 7$ x standard error. On an admission basis the difference = $1 \cdot 89 \pm 0 \cdot 23 = 8 \cdot 2$ x standard error.

The difference in incidence of benign conditions is similarly highly significant. Thus carcinoma and benign conditions of the breast both appear to be definitely more common in Europeans than in the Bantu (Table 12). The lower average age of Bantu women possibly accounts for this difference in carcinomata; but the benign conditions, occurring as they do in a much lower age group, cannot be affected by this factor and other reasons must be sought.

Whether the relative immunity to these benign conditions amongst Bantu women is due possibly to earlier childbearing and longer suckling or to some inborn racial factor is doubtful. However, the fact that these cases occurred at an average age of 21.6 years in the Bantu and 25.1 in the European is perhaps against childbearing and suckling being an important factor, and leaves only the racial factor as being at all likely.

Ovarian Tumours. The figures in Table 13 indicate that ovarian tumours occurred many times more commonly in Europeans than in the Bantu. The only tumour which occurred in the Bantu with a frequency comparable with Europeans was the dermoid cyst.

Dermoid cysts, however, which occur mostly before the menopause (Dockerty, 1945) had an incidence which was not significantly greater in Europeans than in the

TABLE 13

	General Hospital			*Total European Cases*	*Baragwanath Hospital*			*Coronation Hospital*			*Total Bantu Cases*
	1950	1949	1948		1950	1949	1948	1950	1949	1948	
Pseudomucinous cyst adenoma	6	5	2	13	—	—	—	—	—	—	Nil
Dermoid	1	5	2	8	2	1	—	—	1	1	5
Carcinoma solid	2	8	—	10	—	—	—	—	—	—	Nil
Malignant papilliferous cystadenoma ..	—	5	5	10	—	1	—	—	—	1	2
Papilliferous cyst adenoma (benign) ..	1	5	—	6	—	1	—	—	—	1	2
Fibroma	3	—	3	6	—	—	—	—	—	—	Nil
Terratoma	—	—	—	Nil	—	1	—	—	—	—	1
Dysgerminoma	—	—	—	Nil	—	1	—	—	—	—	1
Sarcoma	—	—	2	2	—	—	—	—	—	—	Nil
Totals	13	28	14	55	2	5	nil	nil	1	3	11

European incidence per 1,000 admissions: 1·84.
African incidence per 1,000 admissions: 0·3275.

This difference in the incidence between the two racial groups which is 5.8 × standard error (15.7 ± 2.7) on a population basis, and 6.3 × standard error on an admission basis (1.02 ± 0.16), is probably accounted for by the difference in the average age of total admissions, since ovarian tumours are relatively rare before the age of 40.

Bantu. On a 100,000 population basis the difference = 1.4 ± 1.1 = 1.3 × standard error.

Where, as often happens, there is a doubt on clinical grounds as to whether a pelvic mass is due to salpingitis or to an ovarian tumour, in the non-European at any rate the odds on statistical grounds are very much in favour of salpingitis.

Carcinoma of the Cervix Uteri. Table 14 shows little difference in the incidence of carcinoma of the cervix between European and Bantu.

The average age of the Bantu patient with cervical carcinoma was eight years lower than that of the European. The difference may be due partly to the lower age at which they commence bearing children.

TABLE 14

	General Hospital	*Baragwanath Hospital*	*Coronation Hospital*
1950	40	39	5
1949	44	49	22
1948	16	23	7
European ..	100	Total Non-European	145

European incidence per 1,000 admissions:—2·09
Non-European incidence per 1,000 admissions:—1·77
Difference = 0·3 ± 0·25 = 1·2 x standard error.
European incidence per 100,000 population:—0·0333
Non-European incidence per 100,000 population:—0·0362
Difference = 2·9 ± 4·5 = 0·6 x standard error. These results show no statistical significance.
Average age in European cases: 49·8 years.
Average age in Bantu cases: 41·5 years.

Carcinoma of the Corpus Uteri. Carcinoma of the uterine body is rarely seen in the Bantu, and from the number of cases diagnosed histologically at the three teaching hospitals it appears to be many times as common in the European as in the Bantu. There was no important difference in the average ages of these patients in the two racial groups.

The probable explanation of the different incidence is that relatively few post-menopausal women are seen at the non-European hospitals (Table 15).

TABLE 15

	General Hospital	*Baragwanath Hospital*	*Coronation Hospital*
1950	11	1	—
1949	22	3	—
1948	12	1	1
Totals ..	45	5	1

European incidence per 1,000 admissions: 0·943
Non-European incidence per 1,000 admissions: 0·0737
Difference = 0·87 ± 0·14 = 6·2 x standard error.
European incidence per 100,000 population: 15·2
Non-European incidence per 100,000 population: 0·737
Difference = 13·5 ± 2·3 = 5·9 x standard error. These differences are statistically significant.
Average age of European cases: 57 years.
Average age of Non-European cases: 59 years.

Carcinoma of the Stomach. Table 16 shows that the incidence of gastric carcinoma is much higher in the European. The difference in the average age of the hospital population concerned, and also the much higher incidence of peptic ulceration in the European, is quite enough to explain this difference. Oral sepsis, also said to be a predisposing factor in the aetiology of carcinoma of the stomach, is very common in the Bantu, yet the carcinoma rate remains low. This contrasts with carcinoma of the tongue (see next section) which is relatively common in the Bantu and is probably more directly related to oral sepsis. Strachan found 43 stomach carcinomata in Europeans as compared with 6 Bantu cases.

TABLE 16

	General Hospital	*Baragwanath Hospital*	*Coronation Hospital*
1950, (to 31 August)	11	2	
1949	15	5	
1948	11	3	
Totals	38	10	Nil

Incidence in Europeans per 1,000 admissions: 0·865
Incidence in Non-Europeans per 1,000 admissions: 0·141
Difference = 0·7 ± 0·15 = 4·7 x standard error.
European incidence per 100,000 population: 12·7
Non-European incidence per 100,000 population: 2·5.
Difference = 10·2 ± 2·0 = 5·1 x standard error. These differences are statistically significant.
Average age of Europeans: 55 years.
Average age of Bantu: 54 years.

Carcinoma of the Tongue. No significant difference is shown in the incidence of carcinoma of the tongue between the two races (Table 17). Probably the difference in the ages of the hospital populations is offset by a bigger incidence of oral sepsis in the Bantu.

TABLE 17

	General Hospital	*Coronation and Baragwanath Hospitals*
1950 (to 31 August)	6	2
1949	10	8
1948	2	4
Totals	18	14

Incidence per 1,000 admissions: Europeans: 0·41
Incidence per 1,000 admissions: Non-Europeans: 0·20
Difference = 0·21 ± 0·11 = 1·9 x standard error.
Incidence per 100,000 population: European: 6·0
Incidence per 100,000 population: Non-European: 3·5
Difference = 2·5 ± 1·7 = 1·5 x standard error.

These figures do not agree with Strachan's eight carcinomata of the tongue in Europeans as compared with none in Africans.

Carcinoma of the Lip. The racial difference in lip carcinoma seems too gross to be explained on the difference in the average age alone (Table 18). It may possibly be partly accounted for by the better protection against the sun afforded by the pigmented skin (Gelfand, 1948). It is known that albinos are commonly affected with skin carcinomas.

Benign and Malignant Conditions of the Thyroid. Bantu patients are known to delay seeking medical advice longer

than do Europeans, and it is possibly on this basis that in long-standing cases of adenomatous goitre, carcinomata frequently occur, and so is found at least as frequently as in Europeans in spite of the younger average age of the Natives (Table 19).

Carcinoma of the Bladder. The incidence in the two racial groups shows no significant difference in spite of the age differences.

TABLE 18

	General Hospital European	*Baragwanath Hospital Non-European*	*Coronation Hospital*
1950 (to August) ..	12	0	0
1949	15	1	0
1948	4	2	0
Totals	31	3	0

TABLE 19

	General Hospital		*Baragwanath and Coronation Hospitals*	
	Malignant	*Benign Conditions Requiring Operation*	*Malignant*	*Benign Conditions Requiring Operation*
1950 (to August)	3	27	5	12
1949	0	24	3	23
1948	2	26	3	26
Totals	5	107	11	61

Incidence of malignant conditions per 100,000 population:
European 1·67 } Difference = 1·1 ± 1·2 = 0·9 x standard error.
Non-European 2·75 }
This difference is not significant.

The incidence of benign conditions requiring operation was, however, significantly higher in Europeans both on a population basis and on an admission basis.
Incidence per 100,000 population: European: 35·7
Non-Europeans: 15·2.
Difference = 20·5 ± 3·2 = 6·4 x standard error. On an admission basis the difference is closely similar.

TABLE 20

	General Hospital	*Baragwanath and Coronation Hospitals*
1950 (to 31 August)	7	6 (3 bilharzial)
1949	7	6 (2 bilharzial)
1948	5 (1 bilharzial	0
Totals	19 (1 bilharzial)	12 (5 bilharzial)

Incidence per 100,000 population: European: 6·33
Non-European: 3·0
Difference = 3·3 ± 1·7 = 1·9 x standard error.
Incidence per 1,000 admissions: Europeans: 0·43
Non-European: ·017
Difference = 0·26 ± 0·1 = 2·5 x standard error.

Table 20 does however suggest a higher incidence of bilharzia as an aetiological factor in Bantu cases. Bilharzia is, of course, a recognized precursor of carcinoma of the bladder (though some authorities, such as Gelfand, do not accept this). In Egypt, where bilharzia is endemic, carcinoma of the bladder is commoner than anywhere else in the world. These figures are similar to Strachan's, i.e. nine Europeans and five Bantu.

Rodent Ulcer. These results in Table 21 are highly significant both on a population and an admission basis, rodent ulcer being more common in Europeans than in non-Europeans (Table 21).

TABLE 21

	General Hospital	*Baragwanath and Coronation Hospitals*
1950 (to August) ..	21	1
1949	27	4
1948	8	2
Totals	56	7

Incidence per 1,000 population: European: 0·187
Non-European: 0·0175
Difference = 17·0 ± 2·6 = 6·5 x standard error.
Incidence per 1,000 admissions: European: 1·27
Non-European: 0·0985
Difference = 1·17 ± 0·17 = 6·9 x standard error.

Pigmentation of the skin may here again, as in carcinoma of the lip, afford protection against the sun. The statement by Gelfand that these growths are particularly common in the Native is obviously incorrect. Rodent ulcer makes an interesting comparison with Kaposi's skin sarcoma which Kaminer and Murray (1950) found 38 times in South African Natives and only three times in Europeans.

Other Neoplastic Conditions. The age factor, viz. that Bantu males have an average age of 34.5 in the hospital populations studied while that of the European is 41.9, probably accounts for the variation in incidence in the following conditions.

1. *Carcinoma and Benign Adenoma of the Prostate.* The significance on an admission basis is closely similar, both for benign and malignant conditions (Table 22).

TABLE 22

	General Hospital		*Coronation and Baragwanath Hospitals*	
	European		*Non-European*	
	Carcinoma	*Benign Adenoma*	*Carcinoma*	*Benign Adenoma*
1950 (to August) ..	7	58	1	7
1949	6	65	1	11
1948	6	66	2	9
Totals	19	189	4	27

Incidence of Carcinoma prostate 100,000 population :
European 6·33
Non-European 1·0
Incidence of benign adenoma of prostate per 100,000 population:
European 68·0
Non-European 6·75
Difference = 56·3 ± 4·8 = 11·7 x standard error, i.e., highly significant.

Strachan found six carcinomata of the prostate in Europeans and none in Africans.

2. *Carcinoma of the Rectum.* Table 23 shows that carcinoma of the rectum is more common in Europeans than in Africans.

3. *Carcinoma of the Colon.* Carcinoma of the colon is also more frequent in the European (Table 24).

TABLE 23

	General Hospital	*Baragwanath and Coronation Hospitals*
1950 (to August) ..	6	3 (1 bilharzial)
1949	24	3
1948	12	1
Totals ..	42	7 (1 bilharzial)

Incidence per 100,000 population: European: 14·0
Non-European: 1·75
Difference = 12·3 ± 2·3 = 5·4 x standard error.
The significance on an admission basis is similar.

TABLE 24

	General Hospital	*Baragwanath and Coronation Hospitals*
1950 (to August) ..	5	1
1949	17	2
1948	4	1
Totals	26	4

Incidence per 100,000 population: European 8·7
Non-European 1·1
Difference = 7·7 ± 1·8 = 4·3 x standard error.

SUMMARY AND CONCLUSIONS

The hospital populations of the three teaching general hospitals of Johannesburg have been used for making a comparison between the European and African incidence of various diseases (Table 25). The authors have been on the senior staffs of these hospitals during the period of the survey and are satisfied that similar conditions of admissions, diagnostic routine, etc., prevail.

The only previous comparison to which reference could be made was Strachan's (1934) based on the 3,851 post-mortem examinations he had performed. Berman's work on malignant disease (1935) was handicapped by the fact that he used the non-European section of the General Hospital which could not at that time be considered comparable with the European section. There was gross overcrowding in the non-European wards, and therefore careful screening and selection of cases was unavoidable. Berman did not make a direct comparison of African with European incidence.

The present comparison has been made on:

(a) The basis of hospital incidence per 100,000 population from which the patients have been drawn. This

TABLE 25: SIGNIFICANCE OF RACIAL DIFFERENCE IN DISEASE INCIDENCE

Pathological Condition	*Number of Cases Considered*		*Period Considered*	*Difference per 100,000 of Population*	*Difference ÷ Standard Error of Difference*	*Significance per 100,000 of Population*	*Difference per 1,000 Admissions*	*Difference ÷ Standard Error of Difference*	*More Common*	*Significance per 1,000 Admissions*
	European	*Non-European*								
Appendicitis	405	142	1949	99·5 ± 7·5	13·3	Highly significant	20·1 ± 1·3	15·5	Eur.	Highly significant
Salpingitis	185	3,372	1948, 49, 50	728·0 ± 14·7	50·0	Highly significant	33·7 ± 0·9	35·7	Non-Eur.	Highly significant
Peptic ulcer	1,033	67	1945 to 1949	—	—	Obvious	—	—	Eur.	Obvious
Functional uterine bleeding	95	30	1948, 49, 50	22·5 ± 3·4	6·6	Highly significant	1·8 ± 0·23	7·8	Eur.	Highly significant
Genital prolapse ..	306	9	1945 to 1948	—	—	Obvious	—	—	Eur.	Obvious
Endometriosis	16	2	1948, 49, 50	4·8 ± 1·35	3·6	Significant	—	—	Eur.	Not Estimated
Abortion	2,232	3,643	1948, 49, 50	169·0 ± 21·4	7·9	Highly significant	2·0 ± 1·2	1·7	Similar	Not significant
Ectopic pregnancy ..	133	312	1948, 49, 50	34·0 ± 5·8	5·9	Highly significant	1·1 ± 0·14	7·9	Non-Eur.	Highly significant
Fibromyomata	168	355	1948, 49, 50	27·0 ± 6·5	4·2	Significant	1·6 ± 0·44	3·6	Non-Eur.	Significant
Laryngeal } Benign	14	13								
growths } Malignant	4	4	1948, 49, 50	—	—	No difference	—	—	Similar	Obviously no difference
Breast Neoplasm ..			1948, 49, 50	—	—	—	—	—	—	—
(a) Malignant ..	99	24	1948, 49, 50	27·0 ± 3·5	7·7	Highly significant	1·89 ± 0·23	8·2	Eur.	Highly significant
(b) Benign	95	20	1948, 49, 50	22·5 ± 3·4	6·6	Highly significant	Similar to Mal.	—	Eur.	Highly significant
Ovarian Tumours ..	55	11	1948, 49, 50	15·7 ± 2·7	5·8	Highly significant	1·02 ± 0·16	6·3	Eur.	Highly significant
Dermoids only ..	8	5	1948, 49, 50	1·4 ± 1·1	1·3	No significant difference	—	—	Similar	No significant difference
Carcinoma (cervix) ..	100	145	1948, 49, 50	2·9 ± 4·5	0·6	No significant difference	0·32 ± 0·25	1·2	Similar	No significant difference
Carcinoma (Body of uterus)	45	6	1948, 49, 50	13·5 ± 2·3	5·9	Highly significant	0·87 ± 0·14	6·2	Eur.	Highly significant
Carcinoma (stomach) ..	38	10	1948, 49, 50	10·2 ± 2·0	5·1	Highly significant	0·72 ± 0·15	4·7	Eur.	Significant
Carcinoma (tongue) ..	18	14	1948, 49, 50	2·5 ± 1·7	1·5	No significant difference	0·21 ± 0·11	1·9	Similar	No significant difference
Carcinoma (lip) ..	31	3	1948, 49, 50	—	—	Obviously significant	—	—	Eur.	Obviously significant
Thyroid conditions										
(a) Malignant ..	5	11	1948, 49, 50	1·1 ± 1·2	0·9	No significant difference	—	—	Similar	Obviously no difference
(b) Benign	107	61	1948, 49, 50	20·5 ± 3·2	6·4	Highly significant	1·54 ± 0·26	6·0	Eur.	Highly significant
Carcinoma (bladder) ..	19	12	1948, 49, 50	3·3 ± 1·7	1·9	No significant difference	0·26 ± 0·11	2·5	Similar	No significant difference
Rodent ulcer	56	7	1948, 49, 50	17·0 ± 2·6	6·5	High	1·17 ± 0·17	6·9	Eur.	Highly significant
Prostate hypertrophy										
(a) Carcinoma ..	19	4	1948, 49, 50	5·3 ± 1·5	3·5	Significant	0·38 ± 0·1	3·8	Eur.	Significant
(b) Benign	189	27	1948, 49, 50	56·3 ± 4·8	11·7	Highly significant	3·92 ± 0·32	12·2	Eur.	Highly significant
Carcinoma (rectum) ..	42	7	1948, 59, 50	12·3 ± 2·3	5·3	Highly significant	0·86 ± 0·15	5·7	Eur.	Highly significant
Carcinoma (colon) ..	26	4	1948, 49, 50	7·7 ± 1·8	4·3	Significant	0·53 ± 0·12	4·4	Eur.	Significant

would reflect the viewpoint of the general practitioner or Municipal Clinic medical officer (see Tables).

(b) The basis of 1,000 admissions to hospital, which would reflect the point of view of the casualty medical officer through whom all admissions pass (see graph and Tables).

(c) Where of special interest, a comparison has been made from the specialist's point of view in order to throw light on the probabilities in differential diagnosis.

The following deductions have been made:

1. The average age of the African hospital population was lower than that of the European.

2. Only salpingitis, abortions, ectopic pregnancy and fibromyomata were commoner in the Bantu than in the European and the reasons for this have been considered.

3. The following conditions were all commoner in the European: appendicitis, peptic ulcer, functional uterine bleeding, genital prolapse, endometriosis, breast neoplasms, benign conditions of the thyroid, ovarian tumours, carcinomata of uterine body, carcinomata of lip, stomach and bladder, neoplasms of the prostate and carcinoma of the rectum and colon. The possible reasons have been considered.

4. In the following conditions there was no significant difference in incidence: laryngeal growths, dermoid tumours of the ovary, carcinomata of the tongue, carcinomata of the thyroid and carcinomata of the bladder. In several of these a difference might have been expected on the grounds of the age groups involved, and the possible reasons for these results have been discussed.

5. In a Bantu woman, in a doubtful case, a diagnosis of salpingitis is very much more likely to be correct than one of appendicitis.

6. Where doubt exists in the differential diagnosis between an unruptured ectopic pregnancy and some form of salpingitis, the probabilities are greatly in favour of salpingitis.

7. Endometriosis should practically never be diagnosed on clinical grounds alone in the Bantu, since its diagnostic rival, pelvic inflammatory disease, is so much more common.

8. Most malignant conditions occurred more commonly in the European, probably because there are more Europeans alive in the older age groups.

We are extremely grateful to Prof. O. S. Heyns for his valuable advice in the preparation of this paper and for all the calculations of statistical significances. We also thank Prof. W. E. Underwood for his interest and advice. Finally we are grateful to Dr. K. F. Mills, Superintendent of the Johannesburg Group of Hospitals, and Dr. James Murray, Director of the Routine Section of the South African Institute for Medical Research, for permission to use their records and statistics.

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ASSOCIATION NEWS : VERENIGINGSNUUS

NATAL COASTAL BRANCH

MINUTES OF CLINICAL MEETING, HELD AT KING EDWARD VIII HOSPITAL, DURBAN, ON WEDNESDAY, 28 MARCH 1951

Present: *Dr. A. Broomberg* in the Chair, and approximately 60 members attended.

1. *Dr. Roos* presented a case of a teratoma in an infant. The mother had arrived in hospital in labour. Hydramnios was present and the foetal position could not be decided clinically. X-ray showed a high face presentation with an ill-defined tumour occupying the pelvis. At Caesarean section a living child was delivered which still survives (2 weeks later) and was demonstrated at the meeting.

A very large mass was attached to the right side of the neck, a radiograph of which showed bones to be present in the tumour. In addition, the baby had a cleft palate and a bony abnormality of the maxilla. A demonstration was given of the child sucking from a bottle—the infant has gained weight since delivery. Surgery is contemplated.

Dr. P. Johnson suggested that a barium swallow might help to indicate the line of cleavage between tumour and child.

Dr. Taylor said that this case illustrated the value of X-rays in cases in which the presentation was not clinically ascertainable. Women could thus be saved unnecessary delay before caesarean section.

2. *Dr. Klenerman* demonstrated a case of rickets in a Bantu child and discussed the radiological differentiation between rickets, scurvy and congenital syphilis. Illustrative radiographs were shown.

3. *Dr. Gowans* produced a large selection of foreign bodies removed from ears, noses, oesophaguses and the respiratory tract. Radiographs were also shown. He gave a lucid and interesting description of the diagnosis and treatment of these cases. He quoted a case of a foreign body impacted in a bronchus and which could not be removed with a bronchoscope. It was later removed by Dr. Goldberg in an open operation by incising the bronchus. He thought that this operation was possible because gross infection had not supervened and because an antibiotic 'umbrella' was now possible. The more usual operation was lobectomy or partial lobectomy.

Dr. Friedlander asked about emetics in oesophageal foreign bodies, but Dr. Gowans was against their use. The danger of inverting a child with a bronchial foreign body was pointed out, i.e. impaction in the larynx.

4. A series of short medical cases were shown from the Indian wards:

Dr. Hudson-Bennett showed an Indian woman with haematuria and easily palpable kidneys. Radiographs were shown which confirmed the presence of polycystic kidneys.

Dr. Saloni presented two cases:

(a) *Myasthenia Gravis in a Young Indian Male.* Ptosis and dilated pupils were the main finding. A tourniquet test was positive. The disease had been adequately controlled by oral prostigmine, but this had been omitted for purposes of demon-

stration. An injection of prostigmine was given and the case returned later when improvement in the ptosis could be seen.

(b) *An Aneurysm of the Descending Aorta with Visible Pulsation in the Back.* A radiograph showed erosion of vertebrae with spacing of the disc area. This, *Dr. Denny* pointed out, enabled a certain radiological diagnosis to be made.

Dr. Benningfield demonstrated a case of a rheumatoid type of arthritis occurring in pregnancy. A discussion followed from which it seemed that a diagnosis of rheumatoid arthritis was unlikely in this case.

5. Two short surgical cases:

(a) *Dr. Jackson* showed a patient from whom a mixed salivary tumour was removed from the palate. A photograph of the tumour was circulated.

(b) *Mr. Stafford Mayer* demonstrated a case in which a tendon transplant had been performed following traumatic drainage to the radial nerve. He discussed the historical background of the operation and described the various operations which have been advocated.

Dr. Mungo Thompson advanced an explanation of the mechanism by which a good functional result had been obtained in the present case.

6. *Dr. Mungo Thompson* showed two cases of puerperal sciatic palsy and discussed the possible theories of causation, quoting the different view-points from the literature. This condition must be considered rare as most of the few series described comprise only three or four cases.

Dr. Thompson has collected 13 cases at King Edward VIII Hospital. No correlation between foetal position and the side of the palsy was found.

A discussion followed, but the probably causative mechanism remained obscure.

7. *Dr. Ferries* showed a series of radiographs of a case of probable Friedlander's pneumonia in the right upper lobe, complicated by a broncho-pleural fistula and loculated pyopneumothorax. The condition did not respond to sulphonamides, Penicillin or Aureomycin, but a good response was obtained with Streptomycin. Postural drainage and breathing exercises were used. Although no aspiration or surgical drainage was carried out, the patient has apparently made a good recovery.

Dr. Armstrong gave some interesting figures of the mortality of Friedlander pneumonia during the various 'antibiotic periods'. There appeared to be some evidence that Penicillin is actually dangerous in this condition.

Dr. Ferries had quoted a statement in the literature that Aureomycin is effective in Friedlander's pneumonia and it seems possible that the apparent lack of response in this case was due to an undrained collection of pus in the chest. Drainage by posturing may have been the decisive factor in the patient's recovery, although it is known that Streptomycin is effective. It would seem to be unwise to condemn Aureomycin on the evidence of the rather unusual clinical course in this case.

The meeting ended at 10.15 p.m. and tea was served.

My sincere thanks are due to Dr. A. J. Wilmot for the preparation of these Minutes.

REPORT OF CLINICAL MEETING, HELD ON 18 APRIL 1951, AT KING GEORGE V HOSPITAL, DURBAN

At this Meeting many facets of modern chest surgery and diagnosis were discussed by Dr. Dormer and his Staff. This lecture-demonstration was given shortly after Dr. Dormer's return from overseas and there was a good attendance present.

The papers presented were:

Dr. Beemer: (1). A pathological description of microscopic and macroscopic features of carcinoma of the lung and three unusual cases of the combination of carcinoma and tuberculosis proved on bronchoscopy or surgery, were shown.

Dr. Beemer stressed the value of cytological study of bronchial lavage examinations in the early diagnosis of carcinoma of the lung.

Dr. Randall: (2). The importance of bronchoscopy in tuberculosis. In this paper an attempt was made to show that practically every case of tuberculosis requires bronchoscopy on at least one occasion, if treatment is to be logical and that bronchoscopy is a harmless minor procedure.

Dr. Pirrie: (3). Bronchography and tomography and their importance in X-ray diagnosis of chest disease were ably illustrated by a series of cases.

Dr. Dormer: (4). He discussed recent advances in chest disease and stressed how these advances were bringing tuberculosis into line with other chest work and pulmonary tuberculosis back to the general hospitals, where he firmly believed it belongs.

The meeting was then open to discussion and various people including *Mr. Aubrey Radford* and *Dr. Grant Whyte* contributed.

J. H. Symington,
Honorary Secretary,
Clinical Sub-Commitee.

QUEENSTOWN DIVISION

MINUTES OF ORDINARY GENERAL MEETING HELD IN THE FRONTIER HOSPITAL ON 11 JUNE 1951

Chairman: Dr. Schaffer.

Members present: Drs. Botha, Cheyne, Edelstein, Holmes, Kunz, Katz, Maartens, Papilsky, Rosen, Schaffer, Schulman, Schweitzer, Smuts, Tockar, J. van Schalkwyk, Vellama, M. van Schalkwyk, Voortman, Wolpowitz.

The Chairman welcomed Dr. Smuts as a guest, and was sure he would be interested in the talk to be given by Dr. Katz on some of the aspects of child psychology. The Minutes of the previous meeting were read and confirmed.

Correspondence. (a) Telegram with information that the East London laboratory was not to be closed. Explanatory letter followed.

(b) Letter from Northern Transvaal Branch re *Library of Medical History and Archives of the Medical Association of South Africa.* Members were pleased that such a library is to be established, and are willing to co-operate. Dr. Schafler stated that Heroin is a habit-forming drug; but with the present nomenclature it was not always known which compounds contain Heroin. Dr. Cheyne mentioned that he had seen only one case of Heroin addiction.

Cases. Dr. Tockar showed skiagrams of a female Native with multiple lesions of the bones. She complained of backache and there was tenderness over the lower sacrum. An interesting discussion followed on the diagnosis of carcinoma, hyperthyroidism, multiple myelomatosis, Paget's disease. The chairman thanked Dr. Tockar for bringing forward this interesting case.

The General Practitioner and Child Guidance. An interesting talk was given by Dr. Katz, D.P.M., recently from London where he conducted the Tavistock Clinic. He stressed the child-mother relationship, gave examples and quoted cases. Dr. Smuts thanked Dr. Katz for the interesting and enjoyable discourse. He expressed the opinion that the child should be educated from birth, from pre-adolescence or even the pre-natal age. He gave the history of a boy aged 17 years suffering with enuresis. Others entered into the discussion, quoting cases and asking questions of Dr. Katz.

Tea was served and the meeting ended at 11.5 p.m.

PASSING EVENTS

INTERNATIONAL CONGRESS ON MASS RADIOLOGY

The *First International Congress on Mass Radiology* will be held in Sondalo, Italy, from 1 to 3 September 1951.

Those interested in attending should communicate with the Secretariat of the Congress, at the Italian Federation for the Control of Tuberculosis, 200 Via Nazionale, Rome, Italy.

S.A.N.T.A.

The following resolution was passed unanimously at the Second National Conference on Tuberculosis, Cape Town, 9–11 May 1951:

TUBERCULOSIS ACT

The Second National Conference on Tuberculosis urges the Minister of Health and Social Welfare to consider the preparation and introduction of a Tuberculosis Act which will, *inter alia*, provide:

(a) The provision on a regional basis of the hospital facilities required directly by the State or by the appropriate authority or voluntary body, full capital costs to be borne by the State;

(b) The provision of settlements for sufferers from all kinds of tuberculosis and their dependants, and clarification of the financial responsibilities involved;

(c) Such a merging of the systems of grants for disability and maintenance, and domiciliary treatment, and such re-assessment of the scale of provision, as will secure an adequate standard of family nutrition to prevent the spread of disease; and requests consultations regarding the provisions of this Act be held with all interested and qualified persons and bodies, including the Provincial and Local Authorities, and the Council of the South African National Tuberculosis Association.

MEDICAL CHRISTIAN FELLOWSHIP

There will be a meeting on 15 August 1951, at 8 p.m., in the Physiology Lecture Theatre, Medical School, Mowbray, C.P.

Prof. J. F. Brock will speak on *Psycho-somatic Medicine and the Soul*.

SIR STANFORD CADE IN JOHANNESBURG

Sir Stanford Cade, Surgeon to the Westminster Hospital, London, will be attached to the Department of Surgery at the University of the Witwatersrand during the month of August, at the invitation of the Visiting Lecturers' Trust Fund.

He will take the Surgical Professorial Unit Staff Round in Wards 24-25 of the Johannesburg General Hospital on the Friday afternoons, 17, 24 and 31 August at 2.30 p.m.

In addition to the graduates who regularly attend the staff rounds, others from further afield may wish to avail themselves of this opportunity to meet Sir Stanford and even to present cases for discussion. In the latter case they should first communicate with the Secretary of the Department of Surgery, telephone 44-1492, in order that the necessary arrangements may be made.

Sir Stanford will also take over a proportion of Prof. W. E. Underwood's Unit and demonstrate operations, etc., on selected clinical material.

The Visiting Lecturers' Trust Fund is to be congratulated on making such valuable services available in this country for senior post-graduate students and the many colleagues in practice in the Transvaal.

TUBERCULOSIS SETTLEMENT SCHEMES

A technical sub-committee on the construction and design of Tuberculosis Settlement schemes has been set up under the convenorship of Mr. Paul Sykes, SANTA advisor. Professor Connell, Professor of Architecture at the Natal University and Mr. Archibald, Town Engineer of Springs, have consented to serve on this Committee.

The chief function of this sub-committee will be to hold a watching brief over all settlement schemes in their planning stages, to co-ordinate the practical experience gained on the actual job and to advise local tuberculosis organizations on how to deal with their problems of construction, layout and sanitation.

IN MEMORIAM

DR. J. M. BEYERS

It is with great grief that we of the Cape Eastern Branch report the passing of Dr. J. M. Beyers of Somerset East, an outstanding member since he joined us in 1907.

Dr. J. M. Beyers

He qualified in Edinburgh in 1904 and then settled in Somerset East where he remained in practice till his last illness. He was one of the fast vanishing group of 'family doctors', one who was a friend and confidant, a sharer in all the joys as well as the troubles, and a trusted adviser in many matters outside the scope of medicine. He travelled far and wide during his vacations, for he took Sir William Osler's advice on this matter and he was probably the most travelled member of the profession in South Africa.

Though a faithful member of the Branch he was not often able to motor the 85 miles from Somerset East to come to Grahamstown to the ordinary meetings, but he always tried to be present at the annual meetings. He was President of the Branch in 1930 and gave a most interesting address on *Poisoning by Datura*.

When the Medical Congress was to be held in Grahamstown in 1935, it was felt by the organizing committee that the man for President was Dr. Beyers. He was not one who sought for honours—in fact, it took a great deal of persuasion and a visit to Somerset East by the Secretary to induce him to accept the office, and then an attack of pneumonia nearly prevented him from presiding. He was unable to come to any committee meetings and arrived the day before Congress and said to the Secretary: 'Well, I've come, but whatever am I to do?' 'Just be yourself', was the answer, and it was his charm and friendliness which turned what might have been a dull affair into a very happy Congress. His ready smile and infectious laugh endeared him to his colleagues and his fund of good stories and his adventures were a joy to all those who were privileged to know him.

His last visit to Grahamstown was for the Annual Dinner two years ago when he was decorated with the President of Congress Badge.

To his wife and family we offer our sincere sympathy.

E. M. B.

* * * *

J. C. C. writes: Jan Marthinus Beyers passed away peacefully at his home, Casa Mia, Somerset East, on 21 June 1951.

He was born in 1877, on the farm Nooitgedacht, now known as *The Estate Nooitgedacht*, near Stellenbosch. The stately old building, besides having been the ancestral home of the Beyers family for generations, is of considerable historic interest. It is a known fact that many bits of old, much-prized Dutch furniture, dating back to the time of Simon van der Stel, were made at Nooitgedacht. History tells us that it was here that the old Governor started one of the first furniture factories in the Cape.

Beyers received his public school education at the Training Institute, Wellington. Subsequently he went to the old Gymnasium (now the Boys' High School) at Stellenbosch, and eventually entered Victoria College. Jan Beyers then went to Edinburgh, where he qualified M.B., Ch.B. in 1904. He returned to South Africa, after doing a few locums in England. He started his medical career in Stellenbosch by acting as locum tenens for Dr. Neethling for a time. Shortly after this he bought Dr. Klotz' practice in Somerset East, where he

practised for 47 years. He was appointed District Surgeon in 1912. He was R.M.O. for Cookhouse for several years, working this section from Somerset East. During the Great War he was attached to the Military Hospital, Wynberg. He was one of the past Presidents of the local Branch of the British Medical Association. In 1935 he was elected President of the S.A. Medical Congress which was held at Grahamstown that year.

Dr. Beyers was a man of varied interests. He was a keen and all-round sportsman. Once he represented Edinburgh University in billiards. Prior to this he took an active part in Rugby football at the Victoria College. He was also a breeder of thoroughbred horses for several years. The science of astronomy, of which he had more than an elementary knowledge, was another of his many interests. More than once the wanderlust took him into the Far East, where he visited the Dutch East Indies, including the beautiful island of Java. The cities of South America were known to him, and he had visited most of the continental cities. His favourite haunt was the East Coast of Africa.

In Beyers we found an embodiment of all the valuable qualifications and endowments of a general practitioner.

He personified the ideas of that great surgeon, Da Costa, who said that 'a training in general medicine broadens a man immensely, increases his diagnostic acumen, his therapeutic skill, his prognostic ability, his knowledge of diet, and the control and management of patients and their families'.

He was a delightful conversationalist, as well as an accomplished and amusing raconteur. He was blessed with a most retentive memory—a man widely read and deeply learned in many departments of human knowledge.

Dr. Beyers is survived by his wife, two sons, and a daughter. One of the sons is in medical practice in Heidelberg, Cape. We extend to them all our deepest sympathy.

REVIEWS OF BOOKS

F. J. BROWNE'S ANTENATAL AND POSTNATAL CARE

Antenatal and Postnatal Care. By Francis J. Browne, M.D. (Aberd.), D.Sc., F.R.C.S. (Edin.), F.R.C.O.G. (Pp. 703 with 94 figures. Seventh edition. 30s.) London: J. & A. Churchill Limited. 1951.

Contents: 1. The History and Development of Antenatal Care. 2. Diagnosis of Early Pregnancy. 3. Examination of the Patient. 4. The Hygiene of Pregnancy. 5. The Influence of the Emotions upon Pregnancy and Parturition. 6. The Inheritance of Morbid Characters. 7. Matuity and Postmaturity. 8. Abnormal Presentations and Positions. 9. Multiple Pregnancy. 10. Abnormalities in the Quantity of Amniotic Fluid. 11. Haemorrhage in Early Pregnancy. 12. Haemorrhage in Early Pregnancy (contd.). 13. Haemorrhage in Early Pregnancy (contd.). 14. Unsuccessful Pregnancy. 15. The Rh Factor and Erythroblastosis (Haemolytic Disease of the New-Born). 16. Haemorrhage in Late Pregnancy. 17. Haemorrhage in Late Pregnancy (contd.). 18. Contracted Pelvis and Disproportion. 19. Displacements of the Uterus in Pregnancy. 20. Vomiting in Pregnancy. 21. The Toxaemias of Late Pregnancy. 22. Diseases and Disorders of the Digestive System in Pregnancy. 23. Acute Infectious Fevers in Pregnancy. 24. Diseases of the Circulatory System in Pregnancy. 25. Diseases of the Circulatory System (contd.). 26. Diseases of the Nervous System in Pregnancy. 27. Diseases of the Nervous System (contd.). 28. Diseases of the Nervous System (contd.). 29. Diseases of the Ductless Glands in Pregnancy. 30. Diseases of the Ductless Glands in Pregnancy (cont.). 31. Diseases of the Respiratory System in Pregnancy. 32. Diseases of the Urinary Tract in Pregnancy. 33. Affections of the Skin in Pregnancy. 34. Tumours complicating Pregnancy, Labour and the Puerperium. 35. Venereal Diseases in Pregnancy. 36. The Uses and Value of Radiology in Obstetrics. 37. Postnatal Care

Prof. F. J. Browne's *Antenatal and Postnatal Care* is read in many and distant parts of the world, and is regarded by numbers of obstetricians as the most valuable book of its kind in any language. The last edition appeared in 1946, and its wide circle of readers will welcome this seventh edition. It was felt that the author, who is so thoroughly conversant with all the recent developments in the subject, would soon bring the work right up to date.

The book takes the same form as the previous editions, but it has been revised throughout, and most of the advances in ante-natal midwifery during the past five years have been incorporated. There is a discussion on the Male Toad Test, recent work on the effect of smoking in pregnancy, the use of anti-coagulants in thrombo-phlebitis and phlebo-thrombosis in pregnancy, pregnancy after sympathectomy, and modern work on arthritis and its special bearing on the pregnant state. A new chapter, Acute Infectious Fevers in Pregnancy, has been incorporated and more detail has been given about the disorders of the gastro-intestinal tract in pregnancy to include pregnancy gingivitis, intestinal obstruction and peptic ulcer—notable omissions in previous editions. With the increasing interest in congenital abnormalities in recent years a special section has been devoted to this subject. Dr. Grantly Dick Read has revised the chapter originally written by him on The Influence of the Emotions on Pregnancy and Parturition.

It is a pity that some of the minor shortcomings of the previous editions have not been corrected. There is no mention of otosclerosis and the important effect of pregnancy on this disease. The chapter on Reproductive Insanity is still based on publications that appeared in 1903. The mortality figures for eclampsia quoted are still those of 1922, and in this 1951 edition the author retains the statement, which is not true to-day, that 'eclampsia now ranks first as a cause of maternal mortality in England and Wales'.

It is hoped that these slight shortcomings will be given consideration in future editions of this outstanding and respected publication.

CANCER

Cancer As I See It. By Henry W. Abelmann, M.D. (Pp. 100. $2.75.) New York: Philosophical Library, Inc. 1951.

Contents: 1. Method used in attacking the Cancer Problem. 2. The Cancer cell is a diseased Body Cell rendered so by the invasion of the Cancer Germ. 3. Pleomorphism of the Cancer Germ has delayed Progress in Cancer Research. 4. What is the Cause of Cancer? 5. Cancer may masquerade as an inflammatory Process. 6. Cancer and Inflammatory hyperplasia. 7. The pleomorphic Cancer Germ. Index.

The author of this book has made statements which are not supported by satisfactory scientific evidence and, although he refers to his research, there is no indication that he has made more than superficial observations. From these he makes contentions that will be unacceptable to practically everybody who knows something about neoplastic disease.

He is firmly convinced that a direct fundamental relationship exists between carcinoma, sarcoma, pernicious anaemia, leukaemia, Paget's disease, rodent ulcer, Hodgkin's disease and mycosis fungoides. They are all supposed to arise from different tissue cells which have been invaded by the cancer mould-fungus. Melanomas and chloromas are caused by a black and green fungus respectively. In his 'research' work he has produced all the above diseases by inoculating a mould organism derived from human cancer tissue.

The author is quite satisfied that cancer is infectious, and that heredity plays a part. Round and oval bodies, rod and Y-shaped bodies, cocci, granules and filaments are different forms of the parasitic pleomorphic mould organism, and not contaminants or artefacts or products of cell degeneration.

The author is insistent that the soil is the major source of contamination by the cancer germ. An all-out offensive against faulty sewage, rats, cockroaches, flies and food-handlers is demanded. There are many better books on the cancer problem.

TROPICAL NUTRITION

Tropical Nutrition and Dietetics. By Lucius Nicholls, C.M.G., M.D., B.C., B.A. (Pp. 476 + ix with 57 figures. 3rd ed. 42s.) London: Baillière, Tindall & Cox. 1951.

Contents: 1. Dynamic State of the Body. Carbohydrates. Fats. 2. Proteins. 3. Minerals: Calcium and Phosphorus. 4. Minerals (contd.): Iron, Copper, Magnesium, Sulphur, Manganese, and the 'Trace' Elements. Acid-Base Balance. 5. Vitamins: History. Animal Experiments, etc. 6. Vitamins (contd.): Vitamin A. Vitamin B Complex, Thiamine. 7. Vitamins (contd.): Riboflavin, Niacin, Pantothenic Acid, Inositol, Choline, Folic Acid, Vitamin B_{12}. 8. Vitamins (contd.): Ascorbic Acid, 'Vitamin P' (Citrin), Vitamin D, Vitamin E, Vitamin K. 9. Disorders of Malnutrition. Beriberi, Pellagra, Scurvy, etc. 10. Processing and Preparation of Food. (Milling, etc.) 11. Classification of Foodstuffs. Geographical Origin of Foodstuffs. Cereals and Pulses. 12. Roots and Tubers. 13. Condiments and Spices. Beverages. 14. Food of Animal Origin. 15. Energy Value of Foods. 16. Diets in Hospitals, Prisons and other Institutions. 17 and 18. Public Health Activities. 19. Food Poisoning. 20. Analyses of Foodstuffs. 21. Insect Pests of Cereals and Pulses.

This book sets out the general principles of nutrition and

dietetics for the use of medical men working in tropical climates. It will appeal chiefly to those in the public health services interested in combating malnutrition. The appearance of a third edition, approximately 100 pages longer than the previous edition, is some indication of the popularity this book enjoys. An entirely new chapter on processing and preparation of food has been added.

The book, reflecting the author's wide experience in the Far East, covers the field of tropical nutrition adequately, a full two-thirds being taken up with a discussion of the analysis of tropical foods, diets in various institutions and public health activities in relation to malnutrition. Consequently, the clinical aspect of malnutrition is covered somewhat sketchily.

The practical aspects of the subject, however, are very well surveyed, and this book is recommended to those for whom it is intended.

CORRESPONDENCE : KORRESPONDENSIE

DIE TYDSKRIF EN AFRIKAANS

Aan die Redakteur: Vir diegene wat die bevordering van Afrikaans op hul harte dra, sal opbouende kritiek soos dié van dr. van der Westhuyzen seer verblydend wees (hierdie *Tydskrif*, 23 Junie 1951). Heeltemal tereg en betyds word daarin gevra vir versuiwering en uitbreiding van die Afrikaanse geneeskundige woordeskat. Maar ek is daar oortuig van dat die verkeerde metode aangepak sal word deur alleenlik sekere reëls i.v.m. woordkeuse en spelling in die studeerkamer te bedink, en dan te verwag dat almal somaar sulke reëls sal aanvaar. As dit wel so kan gebeur, sal ek dit ten volle steun. Maar dis nie so maklik nie. Dr. van der Westhuyzen erken dat Afrikaans nog 'n jong taal is; nou ja, dan moet daar onthou word dat die veroudering en geleidelike verbetering van 'n taal of van sy geneeskundige woordeskat voorafgegaan of vergesel moet word deur 'n vermeerderde gebruik van die spreektaal, alhoewel die skryftaal allerbelangriks is. *Eers die spreektaal, dan die skryftaal, en daarna die spelling en die woordkeuses en dies meer.* So was dit altyd met alle tale, en so sal dit ook met die Afrikaanse woordeskat gebeur. Myns insiens bly Afrikaans ver agter in die geneeskunde vergeleke met ander wetenskaplike vakke. Die toekomstige bykomende mediese fakulteit te Stellenbosch sal heelwat help. Maar die groot behoefte *nou*, is vir Afrikaanssprekende medici om hul skouers ook aan die wiel te sit; meer Afrikaanse bydraes tot geneeskundige tydskrifte, nie net in Suid-Afrika nie maar ook in die buiteland—hetsy formele opstelle, resensies, briewe aan die redakteur, ens.; maar veral die toenemende gebruik van die hedendaagse woordeskat, en hopelik van nuwe woorde oor die jare, vir lesings aan medici of studente of verpleegsters en in gesprekke met pasiënte om siektes te verduidelik en in telefoonoproepe aan hospitale en aptekers, ens. My ondervinding is dat sodra die spreker by 'n Afrikaanse mediese benaming kom, daarvoor geskrik word en dan word oorgegaan na Engels! Gee asb. die oë *en die ore* van medici en studente en verpleegsters die geleenthede om die Afrikaanse mediese woordeskat *te proe*; gaandeweg sal die nodige verbetering en uitbreiding vanself volg: ~ ~

Almal stem saam dat benaminge sover moontlik suiwer Afrikaans moet wees. Graag sekondeer ek dr. van der Westhuyzen se keuses waar die Akademie tot dusver nie die leiding gee nie. Maar anderes verskil van die Akademie s'n, en hier meen ek dat laasgenoemde beter klink en ook geriefliker is vir lesings ens.; bv. ek sou periost i.p.v. beenvlies verkies, hematoom i.p.v. swelsel, empieem i.p.v. verswering van longvliesholtes. Dan is die redes vir dr. Van der Westhuizen se besware teen gebruik van Hollandse benamings nie duidelik nie. Ek wil graag aanhaal wat Preller gedurende die Twede Beweging gesê het: ‚Afrikaans is meer as Nederlands, dis Afrikaans plus Nederlands! '

Maar dit alles bring ons terug aan die behoefte vir verbetering. Ek verskil van dr. van der Westhuyzen alleenlik in die metode wat gevolg moet word; ons doelwit is dieselfde. Ek beveel ten sterkste aan dat die mediese woordeskat meer oefening kry, dan sal dit vanself uitbrei en spoediger verbeter.

S. Shulman.

Kaapstad.
30 Junie 1951.

STAGHORN CALCULUS OF THE KIDNEY

To the Editor: In these days of radical surgery the conservative treatment of a urological problem is welcome reading, and I would like to congratulate Dr. Scher on his approach to the staghorn problem in a young subject (this *Journal*, 16 June 1951). The pictures indicate that he has achieved his aim and left the girl with a functioning kidney.

A similar result was obtained more simply in a case I first saw in January 1947. This patient, 49 years of age, complained of attacks of haematuria with pain in the right loin. The centrifuged deposit of her urine contained pus, a few blood cells and cocci, and on cystoscopy her right ureter was found to be rather sticky.

19 May 1947. The kidney was exposed and the stone approached by an oblique incision in the pelvis. It was then carefully manipulated from its bed and removed. One portion broke away and remained in the upper calyx. This was extracted and the pelvis flushed with normal saline. A Foley catheter, cut across proximal to the bag, was drawn into the pelvis through the lower pole and fixed in position with a suture in the capsule. The other end was brought to the surface through a stab wound and saline irrigation continued day and night till 27 May 1947, when the tube was removed.

31 May 1947. The patient was discharged, healed after an uninterrupted convalescence.

The last news I had of her was on 24 January 1949, when

Dr. J. P. Bostock reported on her I.V.P. as follows: 'Equal concentration of the contrast medium in both kidneys.

'No abnormality of calyceal systems, renal pelves or ureters noted.'

Unfortunately these plates were not available to me.

I wish to thank Drs. Greenwood, Theron and Samuel for the pictures. (Fig. 1: The original plain plate. Fig. 2: I.V.P. on 14 November 1947—15-minute picture).

G. Clifford Thomson.

67 Lister Building,
Jeppe Street,
Johannesburg.
2 July 1951.

THE FUTURE OF MEDICAL PRACTICE IN SOUTH AFRICA

To the Editor: Is the public of South Africa aware of the fact that it faces to-day a significant change in the present system of health services? Is the medical profession aware of this fact to the extent that it should be? If so, what is it doing to-day to ensure that health services in South Africa will in the future promote the widest possible extension of curative, preventive, promotive and rehabilitative services for the fullest benefit to patient and doctor?

These two questions must be considered by the medical profession and the public. Not only are the medical profession and the public integrated by a common aim, but it is the duty of the medical profersion to unite on these issues and take the lead away from the hands of the political planners of to-day, to ensure that in the ultimate analysis any new health service planned for South Africa will be one that has been designed, in the main, by medical architects with the help of the public, and that its implementation will be in the hands of trained medical administrators in co-operation with the public.

At the outset one must stress this last basic point, because it is eminently clear to-day that many aspects of our way of living in South Africa are being altered. If there is one national essential service that should be protected from arbitrary direction, it is the art and science of medicine and how it is best applied to help suffering humanity.

The question, therefore, that faces us is: should we wait to hear what the Minister of Health is going to do to the Provincial system of hospital control, and the possible implementation of the National Health Services Report; or are we as members of the medical profession going to act now and take the initiative while the opportunity is here? We must state in unequivocal terms what we are prepared to accept in the best interests of the profession and the public. In this respect one cannot ignore the speech made by the new Minister of Health at his election meeting at Matjesfontein recently. If anything, this pronouncement should draw the medical profession together to reconsider its position in the light of its views already published on the type of medical practice and health services South Africa needs. It must clarify its attitude to the National Health Services Report, which it appears to have put into a pigeon-hole since the late Dr. Stals found it politically impossible to implement its findings.

Before proceeding to discuss what we should do, it is important to review where we stand at the moment.

In brief this may be summarized to the effect that we have allowed ourselves to lose the initiative we had at the time when the National Health Services Report was published, when we issued through the Medical Association the White Paper in support of an organized health service on the lines of the Report. Subsequent to this report, we drifted into an unequal struggle with the Provinces on the control of hospitals, and by a series of compromises with the authorities, have reached the stage where the cost of Provincial hospitalization now is in the region of £8,000,000 to £10,000,000 a year (a tremendous sum of money compared to 10 years ago), and despite the increased expenditure the lot of the medical man has deteriorated to the extent that he is now under the control of Provincial officials who, in the main, are civil servants with little experience of medical administration. Not only is there dissatisfaction with the hospital services from the point of view of the practitioner, but the system is failing daily from the aspect of the needs of the patient. With frustration extending both to the public and the profession, it is inevitable that the new Minister of Health, who is probably the most qualified of all his predecessors to hold this position, will endeavour to bring about an integration in health services, and he has spoken aloud already as to what is on his mind.

In the professional world there is, as a result of increased cost of living, overwork and an iniquitous situation created by Medical Aid and Benefit Societies, a tendency to a splitting of forces in the medical profession over certain practices, ethical or otherwise, to the extent that little is being done by the medical profession to enlighten itself about the changed circumstances to-day with regard to the type of medical practice we should have in South Africa. Consequently, the medical practitioner who takes part in his local Group or Association activities is dealing with details and local problems to the extent that there is a cloud over the profession's attitude to the important issues concerning the medical profession, viz. whether organized medicine should be supported or whether we should have an extension of the present free system, whereby there is no attempt by the State, or any other body, to organize the practice of medicine.

In addition, the Medical Association made a colossal blunder on 18 July last year, when it issued a report of the Committee that met two years before to the effect that the answer to a national health service was the extension of Medical Aid Societies. By so doing, it created in the minds of its members complete confusion, because there is no doubt about it that when the National Health Services Commision Report was published, it was received very favourably by the medical profession. What has since transpired is that the situation in Medical Aid and in Benefit Society practice is not satisfactory, especially with regard to the latter. If all one hears is true, the medical profession is a slave to the Benefit Societies, and the rate of remuneration paid to the medical practitioners under this system is less than that paid to an ordinary journeyman in one of the electrical trades—he at least gets a minimum pay with a cost of living to-day, between 5s. and 6s. per hour. In addition, the conditions of contract between the individual members of the medical profession and the Benefit Societies are such that they are against the ethical rules of the Medical Association.

The development of the Medical Aid and Benefit Societies in South Africa is now apparently strangling the medical profession from an economic point of view and having, as a consequence, very serious deleterious effects on the quality of the work of the medical man in relation to the patient. The stage has been reached, if we believe what is being said at meetings of the Association, when, unless some drastic action is taken, the profession is going to be swallowed up in an internal crisis from which it may not recover, as the State may intervene, because of the serious situation.

Some members of the medical profession therefore believe that the publication of the Report of 18 July on Medical Aid Societies was a mistake, because it endeavoured to kill the sound points of an organized health scheme, and as such it has no longer been kept in the forefront of members of the Medical Association, with the net result that when the present Minister of Health proclaims that it is his intention to implement the findings of the National Health Services Commission Report (if this be true) the profession is by no means ready to face the situation.

There may be a great deal of concern about how the medical profession in South Africa will be affected were it to submit to a National Health Service under Government control. Nevertheless, this was not a sound reason for throwing overboard fundamental principles because it was apparent to some that we had suffered a setback, which might endanger our principles. The confusion which has arisen in the profession over these broad principles of medical practice, if anything, has shown to the Government that the profession has discarded its well thought out principles for the sake of expediency. There is no doubt that the General Practitioner to-day is ready to think in terms of a radical change in the present system in view of the serious economic and ethical position.

There are many other factors that should be emphasized

in explaining our present position. One of the most important issues in deciding whether we should oppose or support a National Health Service Scheme has already been brought up by the suggestion of the new Minister of Health of the possible removal of Provincial control of hospitals. Here we face a muddled situation because it is apparently the Medical Association's attitude at present to oppose the National Health Service Scheme despite the fact that circumstances point towards some type of organized health service (in view of the economic struggle of large numbers of the medical profession, and the dissatisfaction with hospital service, Medical Aid Societies and Benefit Societies). There is also the lack of co-ordination between curative and promotive services, and the unfortunate fear which has genuinely pervaded the medical profession (although most medical men say it is taboo to talk about this) that if this Government proceeds with a National Health Service Scheme, it will be run in a political manner.

What then is the medical profession to do in this dilemma? This is the question that every doctor must ask himself, whether he be a medical man who is a member of a medical committee concerned in any manner with the organization of medical affairs, or not. The problem is not an easy one to solve. But there are certain factors that stand the test of examination from all points of view and can help to decide what the future will hold for the medical profession and the public in relation to health services.

First and foremost the Medical Association must examine the present-day system of medical practice in all its aspects, with special reference to the serious situation into which the profession has drifted, in regard to Medical Aid and Benefit Society practice. In addition it must analyse the relationship which exists to-day between all practitioners and the hospitals, and above all it must examine the broad principles of the free type of practice existing to-day and see whether any drastic changes could be made which would be of benefit to the medical practitioner and the patient. In this instance let us not evade the issue that there is a prior claim in one sense with regard to the practitioner in this country, because of the serious situation already described.

Secondly, the Medical Association must re-state its attitude to the National Health Services Commision Report (Gluckman Report), and its own White Paper on the subject published shortly after the Report was made public. It can only do so again by full discussion in every Branch of the Association, and a co-ordination of present-day views on this issue.

Thirdly, it must state to the medical profession, the Government and to the public that it will resist every attempt by this or any other Government to subject the profession to political control in any form it may take, because it believes that health services can only be effective, efficient and in the interests of the people if they are under the guidance of the medical profession in collaboration with the representatives of the public and other allied essential services.

Fourthly, it must prepare its plan for health services in South Africa as soon as possible, whether this be on the lines of the traditional type of free enterprise services as exist to-day, or on the lines of the National Health Services Report on National Health Insurance, or any other system in which it believes. The profession should have the fullest opportunity of discussing this, so that its views are conveyed to the Minister of Health before he presents the people of South Africa and the profession with a *fait accompli*.

Fifthly, the elected leaders of the Medical Association should keep all medical practitioners informed to-day on developments in the same way that they informed the profession at the time of the Transvaal Hospitals dispute; and that the appointment of a Professional and Public Relations Officer in charge of such a department is a top priority in order to disseminate the facts to all medical personnel. In addition such an officer should be responsible for enlightening the South African public about the profession's point of view, from time to time, in order to counter the various pronouncements made by Provincial and Government officials on health services, so that they, too, should be in full possession of all the facts.

Finally, the Medical Association should establish permanent liaisons with all national organizations such as the Association of Chambers of Commerce and Industry, Agricultural Unions, National Council of Women and other related bodies in the same way that the Government has a Health Council. By such liaison the medical profession will be able to gauge the needs of the public at first hand and in addition engender goodwill for what cause it believes to be just and in the interest of the public and the profession as a whole.

B. Wilson, B.A., M.B., B.Ch.

Johannesburg.
2 July 1951.

Einstein and Integrationalism

To the Editor: Dr. J. J. de Villiers's belief in 'a supreme being who governs the Universe' recalls Hobhouse's wise remark that 'one cannot create God just because one needs him'. Furthermore, the 'truth' of a 'belief' cannot be appraised until we have some sort of an agreement on what 'truth' is to mean.

The dialogue between Christ and his judge is illuminating on this point: 'To this end was I born, and for this came I into the world, that I should bear witness unto the truth' . . . Pilate saith unto him, 'What is truth?'

No answer is accorded, nor have the following nineteen centuries provided, among the thousands of replies given, any two much alike.

The 'truth' of a 'belief' cannot be appraised until we have some estimate of the efficacy of our reasoning processes for reaching this particular kind of 'truth'. Whereas the theologians of the Middle Ages sought the support of logic and reason for their dogmas, Dr. J. J. de Villiers advises a modified medical curriculum, 'a study of embryology, astronomy, atomic physics and non-Freudian psychology', while Dr. Louis F. Freed will apparently accept nothing less complete (?) than Einstein's 29 mathematical equations, as the revealing scientific proofs of their beliefs.

Why these in particular and not, say, a study of soil erosion, sewage disposal, electrical engineering and Einstein's relativity is never made quite clear. Are these latter less efficacious in banishing unfaith in faith? Would they as 'sciences' fail to furnish the kind of 'truth' (and proof) that supports doctrines beyond the reach of scientific experiment? If so, why? If not, what has the study of sewage disposal in common with the study of non-Freudian psychology, and relativity, that would enable one to conclude incontrovertibly that 'a supreme being governs the Universe'? 'Very meet is it therefore', wrote Bacon (1620) 'that we be sober-minded, and give to faith that only which is faith's'.

Experimental verification, not faith, is the life blood of science. Dr. Louis F. Freed's sigh of relief (which sounded like the escape of steam from a pressure cooker) and thankfulness at being 'saved' (from his own doubts?) by Einstein's 29 mathematical equations was apparently accompanied by the prompt abandonment of that 'science' which had so lately 'saved' him. 'Without waiting for the experimental verification of Einstein's integralistic formulations' (his own words) Dr. L. F. Freed launches his own personal formulation even though, on his own cognizances, it can only be posed (never proven) if Einstein's 29 equations are correct. Reverence for the integrity of the Mathematical Master can be carried too far.

'The kernel of the scientific outlook' wrote Bertrand Russell, 'is the refusal to regard our own desires, tastes and interests as affording a key to the understanding of the world'.

Doubt is often creative, and *sub judice* a far healthier, more stimulating verdict than the toxaemia of unsubstantiated formulations and assertions.

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The Mixture as Before.

Cape Town.
4 July 1951.

The Medical Association of South Africa
Die Mediese Vereniging van Suid-Afrika

AGENCY DEPARTMENT : AGENTSKAP AFDELING

JOHANNESBURG

Medical House, 5 Esselen Street. Telephones 44-9134-5, 44-0817
Mediese Huis, Esselenstraat 5. Telefone 44-9134-5, 44-0817

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* * * *

CAPE TOWN : KAAPSTAD

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(761) Consulting room to let in centre of Cape Town. Waiting room and services to be shared.

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(779) Noord-Kaapland. Vanaf 1 September vir ongeveer 2-4 weke. £2 12s. 6d. p.d. plus losies en inwoning.

(778) Noord Kaapland. Dadelik benodig vir 1 maand. £2 2s. per dag plus inwoning en reiskoste. Kar word voorsien. Plaasvervanger kan aanbly as assistent indien verlang.

The South African Institute for Medical Research, Johannesburg

The Board of Management of the above Institute has approved of the establishment of Fellowships for a period of three years at a salary of £500, £600, £700 respectively, plus a variable cost-of-living allowance which is at present approximately £192 per annum, during which period the appointees would be trained in all Departments and permitted to take the D.C.P. course subject to a contract that the officer concerned would be prepared to return to the Institute for at least one year after obtaining his degree on the Senior Professional Scale of £1,000 × 100—£1,400. While attending the full-time D.C.P. course at the University the officer would continue to receive full pay from the Institute. The numbers of appointees is limited to four in any one year.

All appointments will, in the first instance, be for a period of twelve months and reviewed annually, subject to satisfactory progress.

Applications should be addressed to the Director, South African Institute for Medical Research, P.O. Box 1038, Johannesburg.

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Physiotherapy and chiropody practice, centre of Reef town; 3 lock-up rooms, ground floor, car park at entrance, takings £120 to £130 per month; equipped for both professions. For details write to 'A. H. S.', P.O. Box 643, Cape Town.

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Transvaal Provincial Administration

VACANCIES: TRANSVAAL PUBLIC HOSPITALS

Applications are invited from suitably qualified candidates for the undermentioned posts at Public Hospitals in the Transvaal.

Applications should be addressed to the Superintendent or Secretary of the Hospital and should contain full particulars as to the age, professional, academic and language qualifications, experience and conjugal status of the applicant and should further indicate the earliest date upon which duties can be assumed. Copies, only of recent testimonials to be attached.

Hospital	*Vacant Post*	*Emoluments*	*Remarks*
Barberton	Medical Officer-in-Charge (1)	£1,000 x 50—1,200	Plus £180 p.a. house allowance. Married plus (*a*) below. Single plus (*b*) below
Pietersburg	Anaesthetic Registrar (1)	£620—780—820—860	Married plus (*a*) below. Single plus (*b*) below
	Medical Registrar (1)	£620—780—820—860	Married plus (*a*) below. Single plus (*b*) below

(*a*) £256 per annum cost of living allowance.
(*b*) £80 per annum cost of living allowance.

In addition to salary the successful applicants for full-time posts will receive leave privileges and rail concessions.

Closing date of applications: 21 August 1951.

Application forms are obtainable from the Provincial Secretary, Hospital Services Department, P.O. Box 383, Pretoria.

(30240)

Department of Mines

VACANCIES FOR 'TRAINEE' MEMBERS (£960 × 40—£1,120) SILICOSIS MEDICAL BUREAU, JOHANNESBURG

Applications are invited for appointment to the above-mentioned posts.

Candidates must be registered medical practitioners.

'Trainee' Members are eligible to progress to the grade of Member on the scale £1,200 × 50—£1,400, after having served two years on the lower scale, subject to the issue of a certificate of efficiency by the Chairman of the Bureau.

Cost-of-living allowance at the following rates is at present payable:—

Married Officers	*Unmarried Officers*
£256 per annum.	£80 per annum.

Applications must be made on the prescribed form (Z. 83) which is obtainable from any Magistrate or the Secretary for Mines, Standard Bank Chambers, Pretoria, to which address filled-in forms must be forwarded.

The closing date for the receipt of applications is 22 August 1951. (30245)

Industrial Council for the Clothing Industry (Natal) Sick Benefit Fund

P.O. BOX 1331, DURBAN

Applications are invited from local medical practitioners for part-time appointments to the above Fund.

The appointments will be for certain of the outer areas of Durban and the successful applicants will also be required to attend at the Sick Fund clinic, to European, Coloured and Asiatic patients during week days.

Applications should be made to the undersigned, giving particulars of experience, qualifications, etc.

Bruce Brinton
Secretary

Municipality of Pietersburg

VACANCY: MEDICAL OFFICER OF HEALTH

Applications are hereby invited from registered medical practitioners for the position of Medical Officer of Health on the salary scale of £1,200 × 50—£1,500 per annum plus temporary cost-of-living allowance which is at present £109 4s. per annum for a single person and £150 per annum for a married person. The commencing salary will be determined according to the qualifications and experience of the successful candidate.

The encumbent, who will be required to live within the Municipal area, must provide his own motor-car for which a transport allowance will be paid in accordance with existing rates.

Applicants must be bilingual, South African citizens, not more than 45 years of age, and in possession of the Diploma in Public Health.

The successful candidate will be required to devote the whole of his time exclusively to the duties of the Medical Officer of Health and will not be permitted to engage in private practice.

He will be responsible for rendering all such clinical services and public health duties or any other services affecting the health or welfare of the community or any section thereof as may be required of him under any law or as may be lawfully required of him by the Council including such services as the Council is required or authorized to perform under any relevant law in force from time to time. He shall also conduct the medical treatment of the Council's patients in the infectious diseases hospitals or temporary isolation camps that may subsequently be established.

His duties will include the medical examination of employees and prospective employees of the Council and of all persons engaged in the food trade. He shall also examine all Natives presenting themselves for employment at the Municipal Pass Office which is to be established shortly.

The Medical Officer of Health will have charge of and be responsible for the control of health, sanitation and nursing staff of the Council including the cleansing services and will be required to furnish the Government and the Council with all necessary reports in writing, bearing on the functioning and administration of his department.

Applications stating age, marital state, qualifications, previous experience, enclosing a medical certificate of good health and copies of recent testimonials and stating earliest date on which duties can be assumed, which must at any rate not be later than 1 October 1951 must reach the undersigned not later than 27 August 1951.

The successful applicant will be required to serve a satisfactory probationary period of six months, after which, if appointed, he must become a member of the Joint Municipal Pension Fund (Transvaal).

Canvassing for appointment is strictly prohibited and proof thereof will disqualfiy any applicant for appointment.

(Sgd.) J. A. Botes
Act. Town Clerk
(A. 4455)

Municipal Offices
Pietersburg
26 July 1951

Vanderbijl Park Medical Benefit Fund

VACANCY: PART-TIME RADIOLOGIST

Applications are invited from registered radiologists for the above position.

Applications should be addressed to the undersigned, Vanderbijl Park Medical Benefit Fund, P.O. Box 1, Vanderbijl Park, not later than 22 August 1951, and the successful applicant will be required to assume duty at an early date thereafter.

Application forms will be addressed to *bona fide* applicants on written application to the undersigned.

H. A. Lambrechts
Secretary/Treasurer

Johannesburg Hospital and University of Witwatersrand

VACANCY FOR FULL-TIME TEMPORARY PHYSICIAN

A vacancy will exist in the Department of Medicine for a full-time temporary physician (tutorial) from 6 October 1951 to the end of November 1952 which it is proposed to fill either in the grade of physician or in that of assistant physician, according to the qualifications, experience and suitability of the applicants.

Applications are invited for this post and/or for any consequential vacancy as temporary physician or assistant physician which may occur in the event of the tutorial vacancy being filled by the transfer of a member of the present medical staff of the Johannesburg Group of Hospitals.

The salary attached to the grade of full-time physician is £1,800 p.a. and to that of assistant physician of £1,200 × 50—£1,500, plus in either case cost-of-living allowance at the current rate in force.

Applicants should preferably submit their applications on the official form T.A. 633, obtainable on application to the undersigned, but if unable to do so, must at least state full name, address, date and place of birth, marital state, language qualifications, academic and professional qualifications, professional and academic experience, and the earliest date on which they can assume duty. Copies only of testimonials should be sent.

Applications must be submitted in duplicate and be addressed to the Medical Superintendent, Johannesburg Hospital, Smit Street, Johannesburg, and must reach his office not later than 12 noon on Wednesday, 22 August 1951.

K. F. Mills
Medical Superintendent

27 July 1951
KFM/VMB

University of Edinburgh

SOUTH-EASTERN REGIONAL HOSPITAL BOARD, SCOTLAND

Applications are invited for the post of Senior Lecturer in Experimental Surgery and Deputy Director of the Wilkie Surgical Research Laboratory in the University of Edinburgh.

By arrangement with the South-Eastern Regional Hospital Board, Scotland, the person appointed, if suitably qualified and trained, may also be appointed by the Board Associate Assistant Surgeon with consultant status in the Professorial Unit in the Royal Infirmary, Edinburgh.

The Lectureship is, however, not necessarily restricted to candidates who have had a surgical training.

The salary will be in the range £1,500 to £2,000 per annum with placement according to qualifications and experience, and with superannuation benefit and family allowance where applicable.

Further information may be obtained from the Secretary to the University, with whom applications, giving the names of three referees, should be lodged not later than 30 November 1951.

(R 23423)

July 1951

Wanted

Male assistant with view to future partnership required for select busy European practice in Salisbury, Southern Rhodesia. Experience of general practice and thorough knowledge of current medicine essential. Must have own car. Write to 'A. H. V.', P.O. Box 643, Cape Town.

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The concept that allergic tissue responses are important contributory factors in upper respiratory infections has been widely accepted. To combat these allergic manifestations more effectively, the time-tested, dependable decongestant—Neo-Synephrine hydrochloride—has been combined with a new, highly active antihistaminic—Thenfadil hydrochloride.

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For symptomatic control of the common cold, allergic rhinitis including hay fever, vasomotor rhinitis and sinusitis.

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Effective—In common colds, allergic rhinitis including hay fever, vasomotor rhinitis, and sinusitis, excellent results were reported in nearly all cases. There was prompt, prolonged decongestion without compensatory vasodilatation. Repeated doses did not reduce the consistent effectiveness.

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